

**PARASUICIDE IN PEOPLE WITH ALCOHOL DEPENDENCE:  
RELATIONSHIP TO INTERPERSONAL PROBLEM SOLVING  
& RESEARCH PORTFOLIO**

**PART ONE**

**(Part Two bound separately)**

**Clare Parkinson MA (Hons)**

**August 2001**

Submitted in partial fulfilment of the requirements for the degree of  
Doctorate in Clinical Psychology

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Special thanks go to my parents for their help and encouragement throughout all my years of studying. Finally, thank you to Nicola for limitless support and more than a few laughs during the last three years.

## **CHAPTER 1. SMALL SCALE SERVICE EVALUATION PROJECT**

### **Patient and Carer Satisfaction with Physical and Psychological Care Provided by Stroke Services**

**Clare Parkinson**

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow G12 0XH, UK*

Prepared in accordance with the guidelines for submission to *Clinical Rehabilitation*

(Appendix 1.1)

**Patient and Carer Satisfaction**  
**with Physical and Psychological Care Provided by Stroke Services**

**Clare Parkinson \***

Trainee Clinical Psychologist

*Department of Psychological Medicine,*

*Gartnavel Royal Hospital, Glasgow, G12 0XH.*

**Running Title:** Satisfaction with Stroke Services

\* Requests for reprints

## ABSTRACT

**Objective:** To measure patients' and carers' satisfaction with physical and psychological care provided by stroke services in hospital and post-discharge. To compare satisfaction with certain components of care and between patients and carers.

**Design:** Postal Questionnaire Survey.

**Setting:** Stroke Rehabilitation Unit, Law Hospital, Lanarkshire

**Subjects:** All patients discharged from the Stroke Rehabilitation Unit within a four-month period, and identified carers. The response rates were 67% (n=28) for patients and 42% (n=18) for carers.

**Results:** High levels of satisfaction were found overall and for each of the components of care. Satisfaction was higher than previously found on general hospital wards. There were no differences in satisfaction between components of care or between patients and carers. Areas of particular satisfaction were personal care and information in hospital, and post-discharge medical care. Areas of least satisfaction were post-discharge personal care, emotional support and information.

**Conclusions:** Stroke patients and carers were highly satisfied with physical and psychological care provided in hospital and post-discharge. Specialized stroke rehabilitation units may produce greater satisfaction than stroke services in general wards. The areas of least satisfaction are within post-discharge care, and warrant further attention in service planning.



## INTRODUCTION

Since the Kings Fund consensus statement on the treatment of stroke <sup>1</sup> recommended the involvement of stroke patients and their carers in the establishment and monitoring of standards, considerable interest in stroke services has developed.

Several investigations of satisfaction with stroke services have been conducted within the past six years. Two questionnaires designed to measure patient <sup>2</sup> and carer <sup>3</sup> satisfaction with stroke services have been used in the majority of studies. The evidence indicates that patients and carers are generally satisfied with the overall service provided, but a significant proportion are dissatisfied with particular aspects of care <sup>2-7</sup>. Areas of dissatisfaction highlighted include information provision <sup>2-3 5-7</sup>, amount of therapy <sup>2 4 7</sup>, discharge planning and follow-up <sup>2 5</sup>, provision of aids and adaptations <sup>3</sup>, and carer domiciliary support <sup>3</sup>. It has also been demonstrated that patients are more satisfied than carers <sup>5</sup> and it is interesting that higher levels of satisfaction were found in a specialized stroke unit <sup>7</sup> than in general hospital wards <sup>2-6</sup>.

The evidence suggests that people evaluate components of health care differently and draw on all components when making overall satisfaction decisions. Research in the 1980s identified two components of health care: affective (emotional and personal) and instrumental (physical) <sup>8</sup>. Recently, qualitative methods and factor analysis have been used to identify four components of care that were valued by patients: "being cared about, information/advice, clinical care and nursing care" <sup>9</sup>. It is clear that these components could be classified into physical and psychological care. While, in practice, the emphasis

is usually on physical care, it is becoming increasingly recognized that patients also have psychosocial needs following stroke <sup>10</sup>.

The surveys conducted in this area highlighted some dissatisfaction with particular aspects of stroke services. However, satisfaction with psychological care has not been explicitly examined and there is little research on specialized stroke rehabilitation units. It is important to examine satisfaction because it has been demonstrated that dissatisfied patients experience increased psychological distress <sup>9</sup> and are less likely to comply with medical advice, re-attend for further treatment or show an improvement in symptoms <sup>11</sup>. Carers' satisfaction with service provision is also a significant predictor of their later psychological well being <sup>12</sup>. Patient and carer satisfaction therefore has implications for general service planning. This results of this study in particular have implications for a stroke carers' support group, which was planned to be run by a Clinical Psychologist within the Stroke Rehabilitation Unit.

This study examined patient and carer satisfaction with physical and psychological care provided by the Stroke Rehabilitation Unit, Law Hospital, and by community services following discharge. Management and staff actively supported the project.

#### Aims:

- ◆ To examine patients' and carers' satisfaction with both physical and psychological care provided by the Stroke Rehabilitation Unit, Law Hospital, and post-discharge.
- ◆ To identify areas of particular satisfaction and dissatisfaction.

#### Research Questions:

- ◆ How satisfied are patients and carers with physical and psychological care provided in hospital and at discharge and follow-up?
- ◆ With which aspects of care are patients and carers most satisfied or dissatisfied?
- ◆ Are there differences in the satisfaction levels of patients and carers?

## METHOD

### *Design*

Postal Questionnaire to measure patients' and carers' subjective ratings of satisfaction with stroke services.

### *Participants*

All patients ( $n = 42$ ) who were discharged from the Stroke Rehabilitation Unit between March and June 1999, and their carers ( $n = 39$ ), were prospectively identified to take part in the project. Care was taken to ensure that bereaved carers and patients who suffered cognitive impairments which prevented them from reading or writing (based on the Stroke Nurse Specialist's knowledge of the patient) were excluded from the survey. However, none of the patients or carers in the relevant time span fell into either of these categories.

### *Measure*

The Patient Satisfaction Questionnaire <sup>4</sup> and Carer Satisfaction Questionnaire <sup>3</sup>, adapted to meet the aims of this study, were used (see appendix 1.2 and 1.3).

There are two parallel forms of the questionnaire, a patient scale and a carer scale. The original questionnaires contain 13 statements regarding physical care in two sections, “hospital care and treatment” and “discharge and after”, which patients rate on a four-point scale, from strongly agree to strongly disagree. Positively phrased statements are used since “negative statements were found to produce inconsistent results” <sup>4</sup>. The scales have been found to have acceptable levels of construct validity ( $r = .39$  to  $.68$ ) and internal consistency (Cronbach's Alpha =  $.86$ ) <sup>3 4</sup>. Seven items pertaining to psychological care were later added to the “discharge and after” section of the original questionnaires <sup>10</sup>. For the purposes of this study, these additional items were included in both the “hospital care and treatment” and “discharge and after” sections.

Demographic information was also collected.

### *Procedure*

The relevant questionnaire, accompanied by a covering letter was posted to each participant, 2 - 4 weeks following the patient's discharge from the Stroke Rehabilitation Unit. Questionnaires were sent separately to patients and carers. Respondents were asked to complete the questionnaire and return in the envelope provided. Each questionnaire was

coded to facilitate the follow-up of non-responders, and to allow patients' and carers' responses to be matched. The codes were confidential to the researcher. Therefore responses were effectively anonymous. The purpose of coding was made clear to participants, and the anonymity of answers was guaranteed. A reminder letter and a further questionnaire were posted to non-responders 4 weeks after the original distribution.

## RESULTS

### *Characteristics of the Sample*

Of the patient sample, 28 out of 42 returned questionnaires, giving a response rate of 67%. Twelve were male and 16 were female. The mean age was 73 years (range 62 - 85 years), and the mean stay in hospital was 7 weeks (range 1 - 17 weeks). Thirteen patients lived in private accommodation, 12 in local authority housing, 2 in warden supervised accommodation, and 1 had other accommodation arrangements. Nine lived alone, although 25 identified a main carer. This sample was not significantly different from the non-responders on gender (*Chi-square*,  $X^2 = 0.05$ , n.s.) age (*t* test,  $t = 0.21$ , n.s.) or length of stay (*t* test,  $t = 0.15$ , n.s.), and is therefore a representative sample of patients.

Within the carer sample, 18 out of 39 returned questionnaires, a return rate of 46%. Seven were male and 11 were female. The average age was 65 years (range 33 - 87 years). Twelve lived in private housing and 6 in local authority accommodation. Eleven carers

lived with their patient. Demographic data on non-responding carers were unavailable; therefore a systematic comparison was not possible.

### *Satisfaction with stroke services*

To summarize the data, satisfaction was defined as "agree" or "strongly agree" responses, and dissatisfaction was defined as "disagree" or "strongly disagree" responses. Both were expressed as proportions of the total responses.

An "adjusted satisfaction score" was also calculated, for the purpose of conducting inferential statistics. Responses were coded on a scale of -2 to +2 (where -2 = "strongly disagree" and +2 = "strongly agree") and a total score was calculated. To control for missing data and to facilitate comparisons across categories with different numbers of items, the total score was expressed as a percentage of the maximum satisfaction score. This resulted in an interval scale of satisfaction from 100% (completely satisfied) to -100% (completely dissatisfied).

*Overall Satisfaction Levels.* The results indicated a high level of satisfaction overall, with 89% of patients' responses and 85% of carers' responses indicating satisfaction. This is illustrated in Figure 1.

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INSERT FIGURE 1 ABOUT HERE  
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*Satisfaction with Care in Hospital and at Follow-Up.* Satisfaction levels were calculated separately for care in hospital and at discharge and follow-up. Figure 2 shows that there were high levels of satisfaction with both care in hospital and post-discharge. Spearman's rho was calculated on the adjusted scores and revealed a strong positive correlation between satisfaction with care in hospital and post-discharge, which was significant for both patients ( $r = 0.73$   $p < .001$ ) and carers ( $r = 0.91$ ,  $p < .001$ ). There was therefore a strong agreement between satisfaction with care in both locations.

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INSERT FIGURE 2 ABOUT HERE  
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*Satisfaction with Physical and Psychological Care.* Levels of satisfaction with physical and psychological care were also calculated separately. The findings are displayed in Figure 3. There were high levels of satisfaction with both physical and psychological care. Spearman's rho was calculated on the adjusted scores, and revealed a strong positive correlation between satisfaction with physical and psychological care, which was

significant for both patients ( $r = 0.88, p < .001$ ) and carers ( $r = .95, p < .001$ ). There was therefore strong agreement between satisfaction with physical and psychological care.

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INSERT FIGURE 3 ABOUT HERE  
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*Patients' Vs Carers' Satisfaction.* A consistent trend of higher satisfaction for patients than carers was noted (see Figures 1-3). A Mann-Whitney U test was conducted on the adjusted scores to examine the significance of this difference. Patients' and carers' responses were not matched since, due to the low return rate of carers, matching would have resulted in the elimination of more than 50% of the data. The test revealed no significant differences between patients' and carers' level of satisfaction overall ( $U= 216$ , n.s.), or for any of the components of care: hospital care ( $U=216$ , n.s.), discharge & after ( $U=217$ , n.s.), physical ( $U=228$ , n.s.) or psychological care ( $U=223$ , n.s.).

*Areas of particular satisfaction and dissatisfaction.* In order to highlight areas of satisfaction and dissatisfaction, the questionnaire items were further subdivided into eight categories. The results are presented in Table 1.



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INSERT TABLE 1 ABOUT HERE  
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Both patients and carers were most satisfied with personal care and information in hospital and with medical care provided after discharge. They were most dissatisfied with personal care, emotional support, and information provided post-discharge. Free-text comments supported this conclusion. Ten comments praised the quality of care and the staff in the Stroke Rehabilitation Unit, and nine criticized an aspect of care: amount of physiotherapy, lack of information in hospital, follow-up care, lack of information about benefits, and aids and adaptations.

Some particular findings are important for comparison with other studies: 80% of patients and 88% of carers were satisfied with therapy in hospital; 33% of patients and 39% of carers were dissatisfied with the provision of special equipment post-discharge; 28% of carers felt they had not received enough practical help post-discharge; and 26% of patients felt no one had really listened and understood their problems since they left hospital.

*Effect of Social Support on Satisfaction.* There was a consistent trend (on 22 out of 23 questionnaire items) for patients who lived alone to be more satisfied than other patients, however this difference was not significant (Mann-Whitney;  $U=228$ , n.s.). Similarly,

carers' satisfaction levels were not effected by whether or not they lived with the patient (Mann-Whitney;  $U=224$ , n.s.).

*Effect of Length of Stay on Satisfaction.* Since there was variety in the sample with regard to patients' length of stay in hospital (range = 1 - 17 weeks), the relationship of this variable to satisfaction levels was examined. Spearman's rho found no relationship between length of stay and satisfaction for patients ( $r = -.13$ , n.s.) or carers ( $r = .35$ , n.s.).

## DISCUSSION

A high level of satisfaction was found with stroke services overall, and with the identified components of care: in hospital and post-discharge, physical and psychological. Most satisfaction was found with personal care and information in hospital, and follow-up medical care; least satisfaction was found with post-discharge services, particularly personal care, emotional support and information.

There was no difference in patients' and carers' satisfaction levels, and satisfaction was not effected by either the patient's length of stay in hospital or by the level of social support provided by their living arrangements. When people were satisfied with care in hospital, they tended to also be satisfied with post-discharge care; when they were satisfied with physical care, they were also likely to be satisfied with psychological care. Since there is evidence that individuals can discriminate between aspects of care<sup>8 9</sup>, the

relationship between these components suggests equally high levels of satisfaction with all components of care.

The results of this study confirmed the findings of previous research <sup>2 - 7</sup> and demonstrated high levels of satisfaction with psychological care, which had not previously been measured. The satisfaction levels found in this study were similar to those previously found in a stroke rehabilitation unit <sup>7</sup>, and higher than those found in general hospital wards <sup>2 - 6</sup>. The frequently highlighted dissatisfaction with amount of therapy and information was not replicated in this study, indeed respondents were particularly satisfied with information provision in hospital. This suggests that patients and carers may be more satisfied with physical and psychological care provided in a specialized stroke units than in general wards.

The relevance of satisfaction studies to general service planning has often been questioned <sup>13</sup>. It has been argued that satisfaction is not a valid reflection of care provided, since there evidence suggests it is influenced by a number of factors, including age, gender, education, expectations and length of treatment <sup>14</sup>. However, length of treatment did not influence satisfaction levels in this study, and recent research suggests that satisfaction with stroke services is related to real differences in care, independently of individual characteristics <sup>15</sup>. Furthermore, irrespective of their relationship to care provided, satisfaction levels are important in their own right, given the effect of satisfaction on both patient <sup>9 11</sup> and carer <sup>12</sup> outcomes discussed above. Therefore, despite the inherent difficulties, patients' and carers' satisfaction with services should be considered in service planning.

This study therefore has some implications for general service planning. A substantial minority of patients and carers were dissatisfied with elements of care, such as the provision of aids/adaptations, emotional support and information post-discharge. This is consistent with the opinion of experts in the field <sup>1</sup>, and suggests that care following discharge requires particular attention in service planning. For the stroke service based at Law Hospital in particular, these results suggest that the proposed carers' support groups may have a useful role in increasing satisfaction with emotional support and information post-discharge.

There were some methodological problems with this study, which must be considered since they may have effected the results. Although the questionnaires utilized had demonstrated reliability and validity <sup>3 4</sup>, the use of exclusively positive statements may have produced a positive response bias. Indeed, reluctance to criticize hospital services has long been recognized as a problem <sup>16</sup>. Given the chronic nature of stroke and the positive bias of the questionnaires, patients and carers may have been particularly unwilling to express dissatisfaction. It would be interesting to investigate whether a questionnaire using only negative statements would uncover higher levels of dissatisfaction. Also, although the sample in the current study was representative, and the results were similar to those of previous research, it is possible that the relatively small sample sizes may have masked differences in satisfaction levels with particular aspects of care, or between patients and carers.

Satisfaction with stroke services is a relatively new area of investigation, but one that has important implications for the physical and psychological well being of hundreds

of people every year. Further research is necessary to confirm the higher levels of satisfaction found in this study in another stroke rehabilitation unit, to further investigate areas of particular satisfaction and dissatisfaction, and to assess the efficacy of interventions such as support groups and stroke clubs, which are designed to improve stroke services.

### **CLINICAL MESSAGE**

- ◆ There is high satisfaction among patients and carers with regard to stroke services.
- ◆ Least satisfaction is found with aspects of post-discharge care and Stroke Rehabilitation Units may produce higher levels of satisfaction than stroke services in general wards. This must be considered in service planning.

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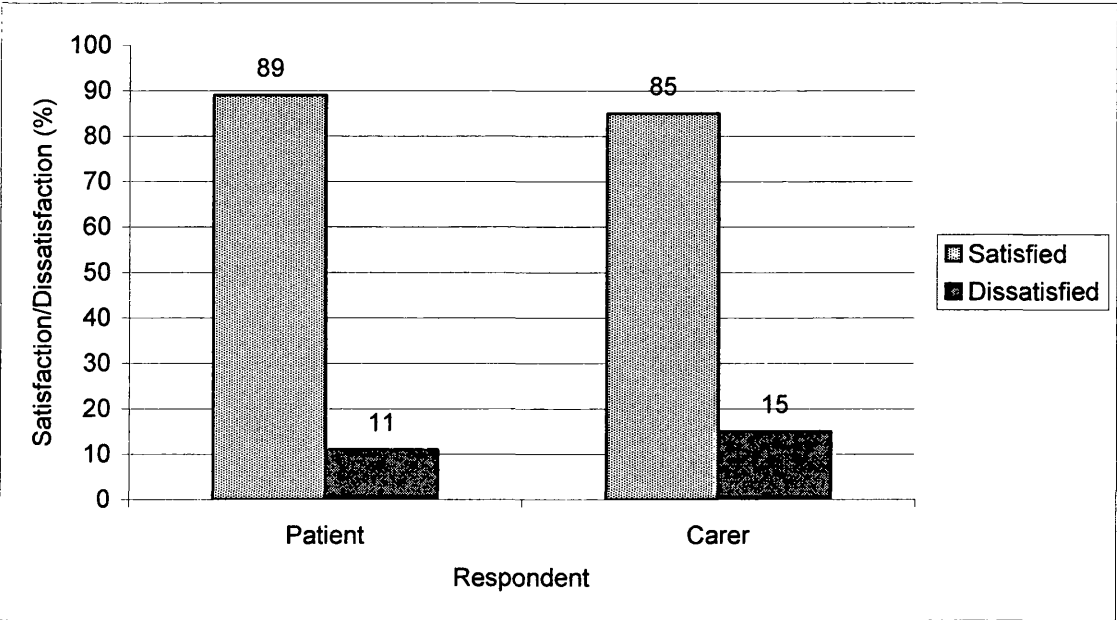
Table 1: Satisfaction / Dissatisfaction with Sub-Components of Care

Factor of Interest		Patients (N=28)		Carers (N=18)	
		Satisfied (%)	D'satisfied (%)	Satisfied (%)	D'satisfied (%)
In Hospital	Personal care	98	2	92	8
	Medical care	90	10	89	11
	Emotional care	92	8	85	15
	Information	94	6	92	8
Discharge & After	Personal care	82	18	73	27
	Medical care	94	6	91	9
	Emotional care	82	18	80	20
	Information	83	17	85	15

*Figure 1: Satisfaction / Dissatisfaction with Overall Care*

Figure depicts satisfaction and dissatisfaction levels expressed by patients and carers overall

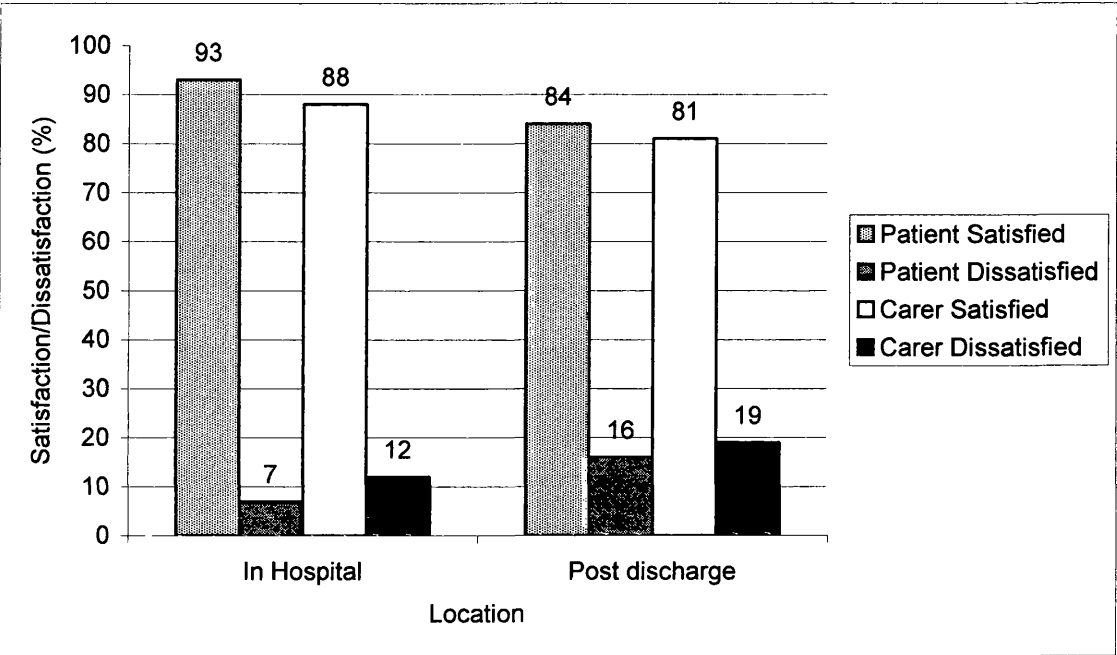
FIGURE 1: Satisfaction / Dissatisfaction with Overall Care



*FIGURE 2: Satisfaction / Dissatisfaction with Care in Hospital and Post-Discharge*

Figure depicts satisfaction and dissatisfaction levels reported by patients and carers regarding care in hospital and post discharge.

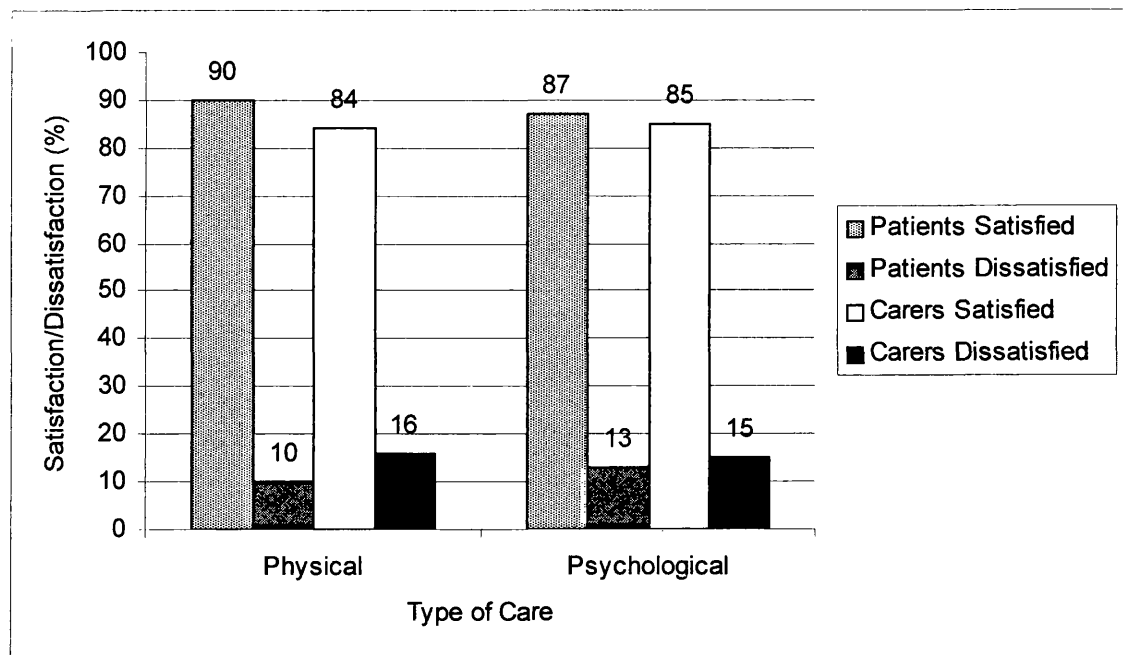
FIGURE 2: Satisfaction / Dissatisfaction with Care in Hospital and Post-Discharge



*FIGURE 3: Satisfaction / Dissatisfaction with Physical and Psychological Care*

Figure depicts satisfaction and dissatisfaction levels reported by patients and carers regarding physical care and psychological care.

FIGURE 3: Satisfaction / Dissatisfaction with Physical and Psychological Care



## **CHAPTER 2. MAJOR RESEARCH PROJECT LITERATURE REVIEW**

### **Risk Factors for Parasuicide in Adults with Alcohol Dependence: The Potential Role of Interpersonal Problem Solving Deficits**

**Clare Parkinson**

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow G12 0XH, UK*

Prepared in accordance with the guidelines for submission to *The British Journal of  
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**Risk Factors for Parasuicide in Adults with Alcohol Dependence:  
The Potential Role of Interpersonal Problem Solving Deficits**

**Clare Parkinson \***

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow, G12 0XH.*

**Running Title:** Suicidal behaviour in people with alcohol dependence

\* Requests for reprints

## ABSTRACT

**Aim:** To review the literature on risk factors for parasuicide in people with alcohol dependence, to highlight gaps in the research on associated psychological factors, and to consider the potential role of interpersonal problem solving deficits.

**Method:** Relevant studies of suicidal behaviour in people with alcohol dependence and research on the relationship between interpersonal problem solving deficits and suicidal behaviour in non-dependent samples were identified through searches of PSYCHINFO, MEDLINE and BIDS databases.

**Results:** Studies investigating suicidal behaviour in people with alcohol dependence have focused on identifying demographic and clinical correlates. The study of individual psychological factors has largely been neglected. However, research in non-dependent populations suggests that interpersonal problem solving deficits may be of etiological significance for suicidal behaviour. It is possible that interpersonal problem solving deficits are also of significance in the suicidal behaviour of people with alcohol dependence.

**Conclusions:** Interpersonal problem solving deficits that have been linked to parasuicide in non-dependent samples warrant further investigation among people with alcohol dependence.

## INTRODUCTION

Suicide is one of the most common causes of death in the UK, and its prevention has been identified as a priority area for health strategy in recent years (Health of the Nation, Department of Health, 1992; Our Healthier Nation, Secretary of State for Health, 1998). Rates of suicide and parasuicide (defined as "any non-fatal, serious, deliberate self-harm, with or without suicidal intent", Williams, 1997) are particularly high in the alcohol dependent population. An analysis of 32 prevalence studies involving 45 000 subjects, found that suicide risk was increased six-fold in this population and reported rates of 5% to 30% for both suicide and parasuicide (Harris & Barraclough, 1997).

Within the suicide research literature, completed suicide, attempted suicide, suicidal ideation and parasuicide are often viewed as within the same behavioural realm and are referred to as "suicidal behaviour". It is a topic of debate whether suicide and parasuicide may be considered to be the same phenomenon. Research comparing the groups on demographic and clinical variables conflicts (see Williams, 1997), but parasuicide has consistently been found to be the single most important predictor of completed suicide (e.g. Gunnell & Frankel, 1994). The general view is that parasuicide and completed suicide represent different but overlapping populations, and that both phenomenon are worthy of research interest. Both are important problems in their own right, given the high prevalence and serious physical and psychological morbidity (e.g. Black, Yates, Petty, Noyes & Brown, 1986). Therefore research on both completed suicide and parasuicide is reviewed in this paper.

## SUICIDAL BEHAVIOUR IN PEOPLE WITH ALCOHOL DEPENDENCE

Most work on suicidal behaviour in the alcohol dependent population has aimed to identify socio-demographic correlates of parasuicide. However, a small number of recent papers examined individual psychological processes associated with suicidal behaviour in this population.

### *Socio-Demographic Characteristics*

There is a considerable body of research in this area. Most studies used cross-sectional designs to compare people with alcohol dependence who have a history of parasuicide to those without such a history. The results have consistently identified a number of characteristics associated with parasuicidal histories. Firstly, socio-economic and marital status appear to be of relevance. Compared to alcohol dependent controls, more of those with a history of parasuicide were unemployed, from social classes III, IV or V, and single, separated or widowed (e.g. Roy, Lamparski, DeJong, Moore & Linnoila, 1990; Windle, 1994). Substance use patterns have also been found to be associated with parasuicide. Those with a history of parasuicide had a longer drinking history, were more severely alcohol dependent and reported more poly-drug use than alcohol dependent controls (e.g. O'Boyle & Brandon, 1997; Windle, 1994). Psychological co-morbidity is also relevant. Those with histories of parasuicide were more likely to have received psychiatric treatment in the past, to have a history of depression, anxiety or personality disorder and to have experienced abuse or neglect in childhood (e.g. Black et al., 1986;

Burch, 1994; Roy, 2001). Finally, family history of psychopathology appears to be significant. Those with parasuicidal histories were more likely to report a family history of drug or alcohol abuse and /or other psychiatric disorders (e.g. Burch, 1994; Roy et al., 1990).

These results have been confirmed by cross-sectional studies using non-dependent controls. Pirkola, Isometsa, Heikkinen and Lonnqvist (2000) conducted a "psychological autopsy" study, retrospectively comparing alcohol dependent and non-dependent suicide completors. Similarly, Platt and Robinson (1991) compared alcohol dependent people with a recent parasuicide to non-dependent parasuicidal controls. Both studies demonstrated that more of those with alcohol dependence were unemployed, from less privileged social classes, separated, divorced or widowed and had a history of psychiatric treatment, compared to those without alcohol dependence. This suggests that the identified variables are particularly associated with parasuicide in the alcohol dependent population.

However, certain limitations should be noted. The data in the psychological autopsy study is retrospective and second-hand, while in the other studies it is based entirely on self-report. This may have introduced inaccuracies and confounded the results. For example, since it was difficult to retrospectively establish alcohol dependence, Pirkola et al. (2000) used the behavioural criterion of having "been in an obvious state of drunkenness at least once or twice a week during the past year " (Pirkola et al., 2000, pp. 70). This may have been under-inclusive. No attempts are made in this body of research to control for the length of time since the parasuicidal episode. The studies are therefore based on the assumption that the variables of interest are stable over time. This may not be the case. Finally, these studies demonstrate an association between suicidal behaviour and

a number of variables, but this is insufficient to determine a direction of causality. It cannot be concluded whether the identified variables are a cause or a consequence of suicidal behaviour.

A small number of longitudinal studies have been conducted in this area, to assess the predictive value of clinical variables for suicidal behaviour. One substantial study traced 32 000 inpatients discharged from psychiatric inpatient care for alcohol dependence, for five to ten years (Duffy & Kreitman, 1993). Secondary diagnoses of affective and personality disorders at discharge were found to be predictive of later parasuicide and completed suicide. In a sample of 1312 alcohol dependent people, Berglund (1984) also demonstrated the predictive value of psychological co-morbidity and pointed to the relevance of life problems in predicting subsequent parasuicide. These results confirm some of those found in cross-sectional studies. However, the inclusion criteria for both longitudinal studies were based on clinical diagnoses of "alcoholism", which the authors admit is less stringent than the application of research criteria. There are also difficulties in determining individuals' cause of death. Both issues may have introduced confounding variables into the research.

Despite some methodological flaws, the consistency of the research in this area is compelling. The results suggest that socio-economic and marital status, substance use patterns, family history of psychopathology and co-morbid psychological disorders are associated with parasuicide in alcohol dependent populations. However, many of these variables are not easily amenable to change, and therefore this body of research does not readily suggest targets for intervention.

### *Individual Psychological Variables*

Some recent work has begun to examine individual psychological processes that may be associated with parasuicide in the alcohol dependent population.

A small number of studies have examined personality characteristics. For example, two studies of Vietnam veterans with alcohol dependence, found that those with histories of suicidal ideation or parasuicide displayed more pathology on personality measures than those with no suicidal history. Pertinent characteristics included aggression, paranoia, pleasure seeking and impulsivity (Burch, 1994; Windle, 1994).

Hewitt, Norton, Flett, Callander and Cowan (1998) examined components of hopelessness and perfectionism. They demonstrated that social hopelessness, socially-prescribed perfectionism and other-orientated perfectionism were elevated in people with alcohol dependence who had a history of parasuicide, compared to those without a suicidal history.

However, these studies also used retrospective designs, and their results must be interpreted with caution since they are based on the assumption that these psychological variables are stable across time. Further research on individual psychological variables associated with suicidal behaviour in the population is necessary to replicate and extend these findings.

Research on suicidal behaviour in people with alcohol dependence has mainly focused on identifying socio-demographic factors that characterise this group. The study of individual psychological factors has largely been neglected. This line of research is important, since it may identify targets for intervention to reduce suicidal behaviour.

However, individual psychological processes associated with suicidal behaviour have been extensively studied in non-dependent populations. The results are promising and deserve further investigation within the alcohol dependent population.

## **PSYCHOLOGICAL FACTORS ASSOCIATED WITH SUICIDAL BEHAVIOUR IN NON-DEPENDENT POPULATIONS**

There are two main areas of research into cognitive risk factors for suicidal behaviour in non-dependent populations: future-directed thinking and interpersonal problem-solving.

### *Future-Directed Thinking*

Deficits in future-directed thinking, also conceptualised as hopelessness, have been found to play a central role in suicidal behaviour. Evidence suggests that hopelessness is a strong predictor of suicidal ideation, repetition of parasuicide and completed suicide (e.g. Petrie, Chamberlain & Clark, 1988; Cannon et al., 1999). Recent work has begun to elucidate components of hopelessness, which may be predictive of parasuicide. An adapted verbal fluency task was used to demonstrate that parasuicidal individuals show decreased anticipation of positive future events, both in the immediate future and in the longer term, while the anticipation of negative future events is unimpaired (MacLeod, Rose & Williams, 1993; MacLeod, Pankhania, Lee & Mitchell, 1997). Little research has been conducted examining hopelessness and parasuicide among the alcohol dependent population.



### *Interpersonal Problem-Solving*

Interest in the interpersonal problem solving of suicidal individuals arose from two strands. Firstly, consistent findings of a strong relationship between suicidal behaviour and negative life events, particularly interpersonal problems, have been well documented in the literature (e.g. McLeavey, Daly, Murray, O'Riordan & Taylor, 1987). Several theories suggest that since suicidal behaviour represents an individual's response to social problems, interpersonal problem-solving abilities mediate the relationship between life events and suicidal intent (e.g. Schotte & Clum, 1982, 1987). Secondly, experimental work on autobiographical memory has demonstrated that suicidal individuals generate less specific and more over-general memories than controls and take longer to retrieve memories which are counter to their mood (Williams & Broadbent, 1986; Williams & Dritschel, 1988). It was hypothesised that this difficulty in retrieving specific positive memories may lead to a reduction in interpersonal problem-solving ability, since both the definition of a problem and the generation of solutions depend on autobiographical memory processes (Williams & Broadbent, 1986). Later work confirmed the relationship between interpersonal problem solving and autobiographical memory in parasuicidal samples (Evans, Williams, O'Loughlin & Howells, 1992).

There is a large body of literature on interpersonal problem-solving and suicidal behaviour. Most research has used the Means-End Problem Solving Procedure (MEPS; Platt & Spivak, 1975a) to measure interpersonal problem-solving abilities. In this procedure respondents are provided with up to ten interpersonal problems and instructed to make up stories to describe how a protagonist overcomes the problem and achieves a

stated outcome. Stories are scored on the number of relevant and irrelevant means (steps) given to solve the problem. The MEPS is presented as a test of imagination, uses the third person format, and has predetermined outcomes, several of which contain antisocial goals. This may reduce realism and cause an atypical problem-solving set to be adopted (D'Zurilla & Maydeu-Olivares, 1995; House & Scott, 1996). However, it has been demonstrated to have satisfactory levels of reliability and validity (Platt & Spivak, 1975a) and is the most widely used assessment of interpersonal problem-solving in the area.

It has consistently been demonstrated that suicidal adults generate fewer relevant means than non-suicidal controls, in response to interpersonal problems. For example, Schotte and Clum (1987) compared psychiatric in-patients who were on suicide observation with equally depressed but non-suicidal in-patients on the MEPS. The suicidal patients generated fewer than half as many relevant means compared to the non-suicidal group. However, the "suicide observation" group included people with both suicidal ideation and recent parasuicide. Later research has indicated that these are demographically different populations, who differ in problem-solving ability (see MacLeod, Williams & Linehan, 1992). Also, 85% of the sample had been diagnosed with schizophrenia, which undoubtedly affected problem solving. The samples used may therefore have confounded the results of this study.

In two later, well-controlled studies, McLeavey et al. (1987) and Rotheram-Borus, Trautman, Dopkins and Shrout (1990) compared people with a recent history of parasuicide to both psychiatric and non-psychiatric controls on the MEPS. The results of both studies indicated that parasuicidal individuals generated fewer relevant means than psychiatric and normal controls, and that psychiatric controls generated fewer means than

normal controls. This was the case even when levels of depression (Rotheram-Borus et al., 1990) and hopelessness (McLeavey et al., 1989) were controlled. Unfortunately, the external validity of Rotheram-Borus et al.'s (1990) study is limited due to the use of a female, adolescent, minority ethnic group sample. Despite the methodological limitations, the evidence in this area consistently suggests that problem solving deficits are found in the general psychiatric population, but that more pronounced deficits are related to parasuicide (see MacLeod et al., 1992, for a more detailed review).

The qualitative nature of means generated by parasuicidal individuals has also been examined. Linehan, Camper, Chiles, Strosahl and Shearin (1987) compared psychiatric in-patients with a recent parasuicide, psychiatric inpatients with current suicidal ideation, non-suicidal psychiatric inpatients and a non-psychiatric hospitalised control group. They revised the MEPS scoring procedure, so that relevant means were divided into active (i.e. participant initiates action) and passive (i.e. a step which is not initiated by the participant) categories. Active problem solving distinguished parasuicides from the other groups. However, these results are based on the use of only three MEPS stories. Although it has been demonstrated that a valid assessment of problem solving can be achieved using an abbreviated version of the MEPS (Platt & Spivak, 1975b), the use of under one third of the test casts some doubt on the validity of these findings. Evans et al., (1992) also modified the MEPS scoring procedure, adding an experimenter effectiveness rating for each story. They confirmed that parasuicidal participants generated fewer relevant means than a hospitalised control group, and demonstrated that the means this group did generate were less effective. Although this study used a small sample ( $N = 24$ ), the results were later replicated by Sidley, Whitaker, Calam and Wells (1997). Finally,

using a measure similar to the MEPS, Orbach, Bar-Joseph and Dror (1990) demonstrated that the solutions of suicidal participants showed less versatility, more avoidance, more negative affect and less reference to the future than the solutions of psychiatric controls. However, the experimental group in this study again included people with both suicidal ideation and recent parasuicide, which may have confounded the results. The results of these studies indicate that the means of solving interpersonal problems generated by suicidal individuals also differ qualitatively from those of non-suicidal individuals. Further research to replicate and expand these results may be useful.

Research on interpersonal problem-solving and parasuicide has also been carried out using self-report measures, which assess participants' perceptions of their own problem-solving abilities. Two studies of adults with histories of suicidal ideation and/or parasuicide, found that those with current suicidal ideation rated themselves as significantly poorer problem-solvers than those without current ideation (Dixon, Heppner & Rudd, 1994; Rudd, Rajab & Dahm, 1994). These were both large-scale studies ( $N = 217$  and  $N = 97$  respectively). However, the use of both ideators and attempters may have confounded their results. These results indicate that negative self-evaluation of problem-solving skill is associated with current suicidal ideation in high-risk samples. Further research using psychiatric and non-psychiatric control groups would be beneficial in extending the external validity of these studies.

A major limitation of almost all research on parasuicide is the testing of individuals after the parasuicidal episode rather than before. Unfortunately, ethical considerations and a low base rate of parasuicide make prospective studies difficult. However, a small number of longitudinal studies have been conducted in this area. Kehrer

and Linehan (1996) conducted a 12-month study of 33 women with Borderline Personality Disorder and a history of parasuicide. They used a revised version of the MEPS, administered at four-month intervals. Responses were scored as relevant or irrelevant, active or passive, appropriate (adaptive) or inappropriate (maladaptive behaviours performed by the protagonist, including substance abuse, aggression and parasuicide). Only the number of inappropriate means generated at four and eight months were found to be significant predictors of repeated parasuicide, and these only explained a small proportion of the variance ( $r = .35$  and  $r = .28$  respectively). However, there were significant methodological flaws with this study. It utilised a small sample size and failed to control for confounding variables including hopelessness and depression. Only three MEPS stories were used, and the stories used varied between testing time and between participants. All participants were concurrently participating in other research, and some had been assigned to one-year treatment groups, which may have affected their problem-solving abilities. The results of this study may therefore be questioned. In another prospective study, Scott, House, Yates and Harrington (1997) tested the predictive value of self-evaluation of interpersonal problem solving style for repetition of parasuicide. Within their sample, those who engaged in further parasuicide within 3 months of their index episode ( $N = 25$ ) were compared retrospectively to those who did not repeat parasuicide ( $N = 27$ ). Those in the repeated self-harm group had rated themselves as significantly less skilled at interpersonal problem solving. Although this study used a relatively short follow-up period, the results suggest that perceived problem-solving ability may also be of predictive value in high-risk samples. Further well-controlled prospective studies would add to this body of evidence. \*

The literature in this area has consistently demonstrated that deficits in interpersonal problem-solving skills are associated with suicidal behaviour in non-dependent samples. Even given the methodological weaknesses of research in this area, the results are compelling. However, the relationship between interpersonal problem-solving and parasuicide has not been examined in an alcohol dependent population.

## CONCLUSION

A review of the literature on suicidal behaviour in people with alcohol dependence has indicated that a number of socio-demographic factors are associated with suicidal behaviour in this population. However, it is difficult to draw conclusions about the direction of causality in this relationship, and although this information is useful in the prediction of groups at particular risk of parasuicide, it does not easily suggest ways in which the individual risk of suicide may be reduced.

The identification of individual psychological correlates of parasuicide has important implications for the prevention of suicidal behaviour. There is a growing body of literature on this topic in non-dependent populations, which suggests that deficits in interpersonal problem solving skills may be significant. However, this has not been adequately examined in the alcohol-dependent population.

Research on the relationship between interpersonal problem solving and suicidal behaviour in alcohol dependent samples is likely to aid the identification of targets for intervention, and may contribute to the reduction of suicidal behaviour in this population.

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### **CHAPTER 3. MAJOR RESEARCH PROJECT PROPOSAL**

#### **Parasuicide in People with Alcohol Dependence: Relationship to Interpersonal Problem-Solving**

**Clare Parkinson**

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow G12 0XH, UK*

Prepared in accordance with the guidelines of the *D.Clin.Psych Handbook* (appendix 3.1)

**Parasuicide in People with Alcohol Dependence:  
Relationship to Interpersonal Problem-Solving**

**Applicant:** Clare Parkinson  
Trainee Clinical Psychologist  
Department of Psychological Medicine  
Gartnavel Royal Hospital  
1055 Great Western Road  
Glasgow G12 0XH

**Supervisor:** Dr Kate Davidson  
Research Tutor  
Department of Psychological Medicine  
Gartnavel Royal Hospital  
1055 Great Western Road  
Glasgow G12 0XH

## SUMMARY

A considerable research effort has been directed at identifying risk factors for suicide. Psychological factors that have been identified include poor interpersonal problem solving, hopelessness and depression. There is a body of evidence supporting the link between problem solving and parasuicide in psychiatric and non-patient samples, but all research to date has excluded participants with alcohol dependence. Alcohol dependence has long been recognised as a risk factor for suicide and research examining this relationship has identified a number of mediating factors. However, although there is evidence that alcohol dependence is generally associated with poor problem-solving skills, interpersonal problem solving has not been explicitly examined in relation to suicide in this population.

This study will test the hypothesis that people with alcohol dependence who have a recent history of parasuicide have poorer interpersonal problem-solving skills than an alcohol dependent control group, and that the alcohol dependent control group have poorer interpersonal problem solving skills than a non-psychiatric control group. It will also examine whether problem solving is related to parasuicide independently of hopelessness and depression. It is intended that parasuicidal participants with alcohol dependence will be recruited from those admitted to Stobhill Hospital, Glasgow Royal Infirmary and the Victoria Infirmary following an episode of serious self-harm. The alcohol dependent sample will be accessed via the alcohol problems treatment unit at The Orchard, and the non-psychiatric control group will be taken from patients attending a renal dialysis ward at Glasgow Royal Infirmary. The data will be analysed using ANOVA

and ANCOVA analyses. The results may have implications for the identification and treatment of people with alcohol abuse/dependence who are at risk of suicide.

## INTRODUCTION

Suicide is one of the most common causes of death in Westernised countries (see Williams & Pollock, 1993). A considerable research effort has been devoted to identifying risk factors for suicidal behaviour. The main psychological risk factors that have been identified are hopelessness and interpersonal problem solving (MacLeod, Williams & Linehan, 1992).

The evidence suggests that hopelessness mediates the relationship between depression and suicidal intent (e.g. Salter & Platt, 1990), and predicts repetition of parasuicide (e.g. Petrie, Chamberlain & Clarke, 1988) and completed suicide (e.g. Beck, Steer & Trexler, 1989). Recent work by MacLeod and colleagues (1993, 1997, 1998) has elaborated the concept of hopelessness and found that suicidal individuals show decreased anticipation of positive future events in the absence of an increase in the anticipation of negative future events.

A number of studies have investigated the role of interpersonal problem solving in suicidal behaviour. In the first of these studies, Schotte & Clum (1982) demonstrated that individuals with poor problem-solving skills who had high levels of stress had higher levels of suicidal intent than student controls. Later studies demonstrated that interpersonal problem solving distinguished suicidal individuals from both within psychiatric controls (e.g. Linehan, Camper, Chiles, Strosahl & Shearin, 1987; Schotte &



Clum, 1987) and non-psychiatric controls (e.g. Evans, Williams, O'Loughlin & Howells, 1992; Sidley, Whitaker, Calam & Wells, 1997). Two studies which compared interpersonal problem-solving in suicidal individuals with both psychiatric and non-patient controls simultaneously, found a hierarchical differentiation, where the problem-solving abilities of suicide attempters was poorer than that of psychiatric controls, and the problem-solving of psychiatric controls was poorer than that of non-patient controls (McLeavey, Daly, Murray, O'Riordan & Taylor, 1987; Rotheram-Borus, Trautman, Dopkins & Shrout, 1990). Problem-solving skills have been shown to be associated with level of suicidal ideation within a sample of suicide attempters (Dixon, Heppner & Rudd, 1994) and to be predictive of suicide attempts in a 12-month follow-up study (Kehrer & Linehan, 1996). Qualitative differences in the problem solving of individuals who seriously self-harm, compared to a psychiatric control group, have also been found (Orbach, Bar-Joseph & Dror, 1990). There is therefore considerable support for interpersonal problem solving as a risk factor for suicide among psychiatric and non-psychiatric populations. However, since all of the research to date has excluded subjects with alcohol dependence, it can not be assumed that these results also generalise to an alcohol dependent population.

Alcohol abuse has long been recognised as a risk factor for suicide (Williams & Pollock, 1993), and a considerable body of research has examined the relationship between these variables. A number of mediating and/or predictive factors have been identified, including: co-morbid disorders, particularly depression, anxiety and personality disorders (e.g. Burch, 1994); hopelessness (e.g. Hewitt, Norton, Flett, Callander & Cowan, 1998); family history of alcohol or psychiatric problems (e.g. Roy, Lamparski,

DeJong, Moore & Linnoila, 1990); demographic variables including socio-economic status, gender and marital status (e.g. Roy et al., 1990); poly-drug use (e.g. Norton, Rockman, Luy & Marion, 1993), and severity of dependence (e.g. O'Boyle & Brandon, 1998). However, although there is evidence to suggest that people who abuse alcohol generally have poorer problem-solving abilities than controls (e.g. Nixon, Trivis & Parsons, 1992) this has not yet been examined as a predictive factor in relation to parasuicidal behaviour.

Given the literature on the role of interpersonal problem-solving in suicide, it seems likely that interpersonal problem-solving deficits are also associated with suicidal behaviour in people with alcohol dependence. The proposed study will examine this relationship. Given that people with alcohol dependence as a group are known to have abstract problem solving deficits, this study will compare the interpersonal problem-solving of an alcohol dependent, parasuicidal group with that of both an alcohol dependent and a non-psychiatric control group. Since hopelessness and depression have also been demonstrated to have a role in suicidal behaviour, the effect of these will be controlled. It is important to study suicidal behaviour in people with alcohol dependence, since this population are at increased risk of suicide, and the risk factors for suicidal behaviour have not been adequately researched.

The proposed study aims to answer the following research questions:

1. Do people with alcohol dependence who have a recent history of parasuicide have poorer interpersonal problem-solving skills than those who have never been suicidal and than a normal control group?

2. Do people with alcohol dependence (who have not recently been parasuicidal) have poorer interpersonal problem solving skills than a normal control group?
3. Does interpersonal problem solving distinguish between these groups independently of the effect of depression and hopelessness?

## METHODS

### *Design*

This will be a between-groups study. An alcohol dependent parasuicidal group will be compared to an alcohol dependent control group (to control for the effects of alcohol dependence) and to a non-psychiatric hospitalised control group (to control for the effects of hospitalisation and current life stress). In order to answer the research questions the three participant groups will be compared on measures of problem solving, depression and hopelessness. To control for other variables known to have an influence on parasuicide, demographic data will be collected, the presence of co-morbid disorders will be screened, and alcohol consumption in the last 24 hours and severity of alcohol dependence will be measured.

### *Participants*

*Group 1:* Males, aged 18-65, who meet DSM-IV criteria (American Psychiatric Association, 1994) for alcohol dependence, who have been admitted to hospital following an episode of self-harm accompanied by intent to die up to seven days prior to participation in the study.

*Group 2:* Males, aged 18-65, who meet DSM-IV criteria (American Psychiatric Association, 1994) for alcohol dependence, who report no history of attempted suicide in the past two years and have recently been admitted to an alcohol problems treatment unit or have recently begun attending the unit as outpatients.

*Group 3:* Males aged 18-65, with no history of substance abuse or suicide attempts, who are attending a renal dialysis ward.

It is recognised that at the time of testing some participants may still be in the detoxification period following the cessation of the consumption of alcohol, and this may effect their cognitive functioning (Lezak, 1995). However, it is not practically possible to interview participants after the detoxification period (approximately six days) as the parasuicide sample are likely to have been discharged from hospital, potentially be consuming alcohol again, and are notoriously difficult to follow-up. There is also evidence to suggest that problem-solving deficits in parasuicide are a state rather than a trait phenomenon (Schotte, Cools & Payvar, 1990). Therefore all participants will be interviewed shortly after admission to hospital. In order to control for the effects of detoxification those in severe withdrawal, defined as a Windsor Clinic Alcohol Withdrawal Scale (Metcalf, Sobers & Dewey, 1995) score of 12 or over, and those exhibiting disorientation, poor contact with examiner, thought disturbance and/or hallucinations will be excluded. Groups 1 and 2 will also be matched for severity of dependence and withdrawal symptoms and brief neuropsychological screening will be conducted.

The groups will also be matched for age, sex and socio-economic class (determined by a Deprivation Category score, Carstairs & Morris, 1991). Participants who report a history of traumatic brain injury which warranted hospital admission for more than 48 hours, or a medical condition that might effect psychometric testing, for whom consent is difficult to establish or for whom English is not a first language, will be excluded.

Power analysis was conducted using GPOWER (Faul & Erdfelder, 1992). Since the current hypothesis has not previously been tested in an alcohol dependent population, this analysis was based on reported scores on the Means End Problem Solving Procedure (MEPS; Platt & Spivack, 1975a) for non-dependent samples. The data used was taken from two studies that compared non-dependent parasuicidal groups with psychiatric and non-psychiatric controls on the MEPS. Both studies found a hierarchical differentiation, where the parasuicide group scored less than the psychiatric control group, and the psychiatric control group scored less than the non-psychiatric control group (McLeavey et al., 1987; Rotheram-Borus et al., 1990). It was assumed that the mean scores of the parasuicidal groups in these studies would be approximately equivalent to the mean score of an alcohol dependent parasuicidal group, that the mean scores of the psychiatric control groups would be equivalent to that of an alcohol dependent control group, that the mean scores of the non-psychiatric groups would be equivalent to that of the non-psychiatric control group in the planned study. It was therefore also assumed that the effect size previously found in non-dependent groups would be similar to that found in the alcohol dependent sample in the current sample. Based on these assumptions, it was estimated that to achieve 80% power to detect a statistically significant difference at the  $p < .05$  level of

significance, given a large effect size ( $f = .54$ ), a minimum sample of 36 (12 participants in each of three groups) was required.

### *Measures*

*Means-End Problem-Solving Procedure (MEPS; Platt & Spivack, 1975a).* To measure interpersonal problem-solving abilities. This task provides the respondent with 10 situations for which he or she is presented with a stated need and a desired outcome. The respondent is instructed to provide the middle portion of the story in which they are to achieve the stated goal. Stories can be scored on a number of dimensions including numbers of relevant means, irrelevant means, no means, and obstacles. In order to reduce testing time, only six of the MEPS stories will be presented. Platt & Spivack (1975b) showed that it is not necessary to administer all ten stories to obtain a valid estimate of problem-solving skills. As recommended by reviewers (D'Zurilla & Maydeu-Olivares, 1995; House & Scott, 1996) the instructions will be modified to present the tasks as a test of problem-solving rather than imagination and to ask for ideal strategies.

*Semi-Structured Interview.* To provide information on age, ethnicity, marital status, postcode, employment status, medication, history of head injury, details of alcohol consumption in the 24 hours prior to participating in the study and history of medical and/or neurological conditions.

*Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I) Section E (Alcohol and other substance use disorders)* (First, Spitzer, Gibbon & Williams, 1996). To assess whether individuals meet DSM-IV criteria for alcohol abuse/dependence.

*Severity of Alcohol Dependence Questionnaire (SADQ; Stockwell, Murphy & Hodgson, 1983)*. To assess severity of alcohol dependence. This questionnaire will only be administered to those participants who are highlighted by the SCID-I to be abusing alcohol.

*Windsor Clinic Alcohol Withdrawal Assessment Scale (WCAWAS; Metcalfe et al., 1995)*. To assess severity of withdrawal symptoms. This is a 10-item clinician administered checklist, which assesses various aspects of the alcohol withdrawal syndrome.

*Parasuicide History Interview (Linehan, Wagner & Cox, 1989)*. To obtain information on the number and circumstances of parasuicide episodes. This is a semi-structured interview, which takes under 5 minutes to administer.

*Beck Scale for Suicide Ideation (BSI; Beck, Kovacs & Weissman, 1979)*. To measure suicidal intention. In order to reduce testing time for participants, a shortened version will be used (items 2, 4, and 5)

*Beck Hopelessness Scale (BHS; Beck, Weissman, Lester & Trexler, 1974)*. To measure hopelessness. This is a 20-item true/false scale.

*Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).* To quantify levels of anxiety and depression. This measure was chosen as it was developed and standardised on a hospital population and therefore takes less account of somatic symptoms than other assessment tools.

### *Neuropsychological Screening*

(a) National Adult Reading Test, Second Edition (NART; Nelson, 1991). To provide an estimate of pre-morbid functioning.

(b) Wechsler Adult Intelligence Scale- Third Edition (WAIS-III, Wechsler, 1998a)

Digit Span. To assess concentration/attention, sequencing, rote learning.

Digit Symbol. To assess psychomotor speed, new learning, mental alertness.

(c) Wechsler Memory Scale-Third edition (WMS-III, Wechsler, 1998b)

Word Lists. Robust assessment of memory

(d) Hayling and Brixton Battery (Burgess & Alderman, 1993) To assess executive functioning.

### *Setting*

The parasuicidal group will be recruited from consecutive admissions to Stobhill Hospital, Glasgow Royal Infirmary and the Victoria Infirmary. The alcohol dependent sample will be recruited from the alcohol problems treatment unit at The Orchard. The non-psychiatric control group will be recruited from patients attending a renal dialysis ward in Glasgow Royal Infirmary.



### *Procedure*

Potential subjects will be identified by staff in the relevant wards and provided with an information sheet about the project. They will be provided with an information sheet (appendix 3.2) and the researcher will be available to provide explanations and answer questions. Written consent will be obtained (appendix 3.3). The above measures will then be conducted during an interview with the researcher in the relevant hospital ward. It is estimated that the assessment will last 90 - 120 minutes, with a break halfway through at the request of the participant. Participants' emotional response to the interview will be assessed at the end of the session. General practitioners will be informed of their participation.

## **DATA ANALYSIS**

Data gathered during the study will be anonymised and stored on SPSS for windows on the researcher's password-controlled personal computer. Initially, descriptive statistics will be used. Since some of the demographic data collected will be categorical, and some continuous, comparisons between groups will be made using chi-square, Kruskal-Wallis tests and one-way ANOVA. In order to answer the main research question, scores on the MEPS will be compared across the three groups using ANCOVA, with hopelessness, depression, and severity of withdrawal symptoms as co-variates.

**PRACTICAL APPLICATIONS**

The results of the proposed study could have implications for the identification and treatment of suicidal individuals. If vulnerable individuals are characterised by deficits in interpersonal problem-solving skills, it may be possible to screen all patients with alcohol abuse/dependence and identify those at risk on this basis. This study would also provide support for a cognitive-behavioural treatment approach focusing on problem-solving skills.

**TIME-SCALE**

<b>Element of research</b>	<b>Proposed time-scale</b>
Submission of Research Proposal	March 2000
Ethics Application	May 2000
Literature Review	July-August 2000
Data Collection	July 2000-April 2001
Data Analysis	May 2001
Report Writing	June- July 2001
Project Completed	August 2001

## **ETHICAL APPROVAL**

Ethical approval has been secured from the ethics committees of each trust / hospital to which potential participants may be admitted: Greater Glasgow Primary Care NHS Trust, South Glasgow University Hospitals Trust, Stobhill NHS Trust, and Glasgow Royal Infirmary (see appendix 3.4).

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## **CHAPTER 4. MAJOR RESEARCH PAPER**

### **Parasuicide in People with Alcohol Dependence: Relationship to Interpersonal Problem-Solving**

**Clare Parkinson**

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow G12 0XH, UK*

Prepared in accordance with the guidelines for submission to *The British Journal of  
Clinical Psychology* (Appendix 4.1)

**Parasuicide in People with Alcohol Dependence:  
Relationship to Interpersonal Problem-Solving**

**Clare Parkinson \***

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow, G12 0XH.*

**Running title:** Parasuicide in people with alcohol dependence

\* Requests for reprints

## ABSTRACT

**Objective:** To test the hypothesis that interpersonal problem-solving performance in alcohol dependent men with a recent episode of parasuicide is poorer than that of alcohol dependent controls and that the performance of alcohol dependent controls is poorer than that of non-psychiatric controls.

**Design:** A between groups design was used.

**Method:** The Means-End Problem-Solving Procedure (MEPS) and measures of hopelessness, depression, anxiety, severity of dependence, withdrawal effects, and cognitive functioning were used. These were administered to 15 alcohol dependent men who had been admitted to hospital following a parasuicidal episode, 15 alcohol dependent men with no recent history of parasuicidal behaviour and 15 non-dependent men who were attending hospital for renal dialysis. Comparisons between the groups were made.

**Results:** No significant differences were found between the groups on MEPS performance. The parasuicidal group scored significantly higher than both control groups on measures of hopelessness and life events.

**Conclusions:** The results suggest interpersonal problem-solving may not be associated with parasuicide in the alcohol dependent population. However, it may be that the methodological limitations of this study masked an existing difference in interpersonal problem-solving between the groups. It is also possible that aspects of interpersonal problem-solving not assessed by the MEPS are relevant. Hopelessness and life events may be important in the parasuicidal behaviour of this population. Directions for further research are highlighted.

## INTRODUCTION

Suicidal behaviour is a significant problem in the alcohol dependent population. Incidence rates of 5% to 30% have been reported for both suicide and parasuicide (defined as "any non-fatal, serious, deliberate self-harm, with or without suicidal intent", Williams, 1997). This is almost six times higher than rates reported in the non-dependent population (Harris & Barraclough, 1997).

Most research on suicidal behaviour in the alcohol dependent population has aimed to identify socio-demographic risk factors. Factors found to be significant include socio-economic status, marital status, interpersonal problems, family history of psychopathology, severity of alcohol dependence, and co-morbid psychological disorders, particularly depression, anxiety and personality disorder (see Parkinson, 2001, for a review). However, few prospective studies have been conducted and the evidence is not sufficient to indicate a direction of causality. The identified risk factors are not easily amenable to change, consequently this research does not readily suggest targets for intervention, and has limited clinical implications.

A small number of studies have investigated individual psychological factors associated with parasuicide in this population. These studies suggest that hopelessness, perfectionism and personality traits such as impulsivity, aggression and paranoia may be relevant (Burch, 1994; Hewitt, Norton, Flett, Callander & Cowan, 1998; Windle, 1994). However, the results of these studies must be interpreted with caution, as they used retrospective designs and are based on the assumption that psychological variables are stable across time.

Individual psychological factors associated with parasuicide have been more extensively studied in non-dependent populations. There are two main areas of research: hopelessness and interpersonal problem-solving.

Hopelessness has been consistently shown to be a strong predictor of suicidal ideation, repetition of parasuicide and completed suicide (see MacLeod, Williams & Linehan, 1992, for a review). Recent work has elaborated this concept and demonstrated that suicidal individuals show decreased anticipation of positive future events in the absence of an increase in the anticipation of negative future events (e.g. MacLeod, Rose & Williams, 1993).

Interest in the interpersonal problem-solving of suicidal individuals arose from two strands. Firstly, there is consistent evidence of a relationship between suicidal behaviour and negative life events, particularly interpersonal problems (e.g. McLeavey, Daly, Murray, O'Riordan & Taylor, 1987). Several theorists proposed that since suicidal behaviour represents a response to social problems, interpersonal problem-solving abilities mediate the relationship between life events and suicidal behaviour (e.g. Schotte & Clum, 1982, 1987). Secondly, work on autobiographical memory has demonstrated that suicidal individuals generate more over-general memories than controls and take longer to retrieve memories which are counter to their mood (Williams & Broadbent, 1986; Williams & Dritschel, 1988). It was hypothesised that this deficit in retrieving specific memories may cause a reduction in interpersonal problem-solving ability since both the definition of a problem and the generation of solutions depend on autobiographical memory processes (Williams & Broadbent, 1986). Later research confirmed the

relationship between autobiographical memory and interpersonal problem-solving in a parasuicidal sample (Evans, Williams, O'Loughlin & Howells, 1992).

Research on interpersonal problem-solving has consistently demonstrated relative deficits in suicidal adults compared to psychiatric and non-psychiatric controls. Parasuicidal individuals generate fewer relevant means (steps) of solving interpersonal problems than control samples (see Parkinson, 2001 for a review). The means generated by parasuicidal participants are also more inappropriate (Kehrer & Linehan, 1996), more passive (Linehan, Camper, Chiles, Strosahl & Shearin, 1987) and less effective (Evans et al., 1992) than those of control groups. Negative self-evaluation of interpersonal problem-solving is also associated with suicidal ideation in high-risk samples (Dixon, Heppner & Rudd, 1994; Rudd, Rajab & Dahm, 1994). Finally, interpersonal problem-solving abilities are predictive of suicidal behaviour in longitudinal studies (Kehrer & Linehan, 1996; Scott, House, Yates & Harrington, 1997).

Most of the research in this area used the Means End Problem-Solving Procedure (MEPS; Platt & Spivack, 1975a). In this procedure respondents are provided with up to ten interpersonal problems and asked to make up stories to describe how a protagonist overcomes the problem and achieves a stated outcome. This measures means-end thinking, i.e. the identification of relevant specific steps that are instrumental in achieving a stated outcome. However, the MEPS is presented as a test of imagination, uses the third person format, and has predetermined outcomes, several of which contain antisocial goals. It has been suggested that this may reduce realism and cause an atypical problem-solving set to be adopted (D'Zurilla & Maydeu-Olivares, 1995; House & Scott, 1996). Research in this area has also been criticised on the basis of the control groups used. Often, a non-



suicidal psychiatric control group was not included, or the general population group was not equated for current life stress or trauma associated with hospitalisation (Linehan et al., 1987). Despite evidence that hopelessness and depression are related to both suicidality and interpersonal problem-solving (e.g. Marx, Williams & Claridge, 1992) the effect of these confounding variables is rarely considered. Finally, there is some debate regarding whether MEPS performance is related to intelligence and abstract reasoning ability (e.g. Butler & Meichenbaum, 1981; D'Zurilla & Nezu, 1982), but few studies attempt to control for this. Despite these limitations, the evidence in this area is relatively robust, and its consistency is compelling.

It is well-established that alcohol abuse is associated with cognitive deficits (Lezak, 1995) and there is some evidence that people with alcohol dependence have poorer interpersonal problem-solving skills than non-dependent controls (Nixon, Trivis & Parson, 1992; Patterson, Parsons, Schaeffer & Errico, 1988). However, interpersonal problem-solving has not been examined in relation to parasuicide in the alcohol dependent population.

This study aimed to test the hypothesis that the interpersonal problem-solving performance of people with alcohol dependence who engage in parasuicide is poorer than that of alcohol dependent controls, and that the performance of alcohol dependent controls is poorer than that of non-psychiatric controls. It was further predicted that interpersonal problem-solving would distinguish between these groups, even when the effects of hopelessness and depression were controlled.

## METHOD

### *Design*

A between-groups design was used. In order to control for the effects of alcohol dependence, current life stress, and the trauma of hospitalisation, an alcohol dependent parasuicidal group was compared to both an alcohol dependent control group and a non-psychiatric hospitalised control group.

### *Participants*

*(1) Alcohol Dependent Parasuicidal Group (N=15)* (Hereafter referred to as parasuicidal group). A consecutive sample of men aged 18-65 years, who had been admitted to hospital following a parasuicidal episode and who met diagnostic criteria for alcohol dependence (DSM-IV; American Psychiatric Association, 1994) were recruited. Participants were excluded if there was evidence of any of the following: severe withdrawal, defined as a Windsor Clinic Alcohol Withdrawal Assessment Scale (Metcalf, Sobers & Dewey, 1995) score of 12 or over and/or evidence of disorientation or poor engagement; history of head injury which warranted hospital admission for more than 48 hours; a medical condition which could affect cognitive functioning; difficulty in establishing consent; or if English was not a first language. Twenty-three potential participants were assessed. Eight were excluded: three did not meet criteria for alcohol dependence, two were deemed medically unfit to participate, one had accidentally self-

poisoned and two displayed symptoms of severe withdrawal. Participants were interviewed within two days (mode = 1 day) of admission.

*(2) Alcohol Dependent Control Group (N=15)* (Hereafter referred to as alcohol control group). A consecutive sample of men aged 18-65 years, who met diagnostic criteria for alcohol dependence (DSM-IV, American Psychiatric Association, 1994), were recruited from an Alcohol Problems Treatment Unit. Exclusion criteria were as for the parasuicidal group. Those with current suicidal ideation or an episode of parasuicide in the past three years were also excluded. Nineteen potential participants were identified. One refused to participate, and three were excluded due to histories of parasuicide and/or admissions to hospital for more than 48 hours following head injury. Participants were interviewed on a median of seven days (range 1 - 25) after admission.

*(3) Non-Dependent Hospitalised Control Group (N=15)* (Hereafter referred to as non-dependent control group). A consecutive sample of men aged 18-65 years, who were attending a general hospital, were recruited. Participants were recruited from a renal dialysis ward, for practical reasons. Exclusion criteria were as for the alcohol dependent control group, and those with a history of alcohol or drug abuse were also excluded. Seventeen potential participants were identified. One refused to participate and one was excluded due to a history of alcohol abuse.

Since the MEPS has not previously been used with an alcohol dependent population, *a priori* power analysis was conducted based on reported MEPS scores for non-dependent

samples (McLeavey, Daly, Murray, O'Riordan & Taylor, 1987; Rotheram-Borus, Trautman, Dopkins & Shrout, 1990). It was assumed that the mean scores of the parasuicidal groups in the above studies would be approximately equivalent to the mean score of an alcohol dependent parasuicidal group, that the mean scores of the psychiatric control groups would be equivalent to that of an alcohol dependent control group, that the mean scores of the non-psychiatric groups would be equivalent to that of the non-psychiatric control group in the current study. It was therefore also assumed that the effect size previously found in non-dependent groups would be similar to that found in the alcohol dependent sample in the current sample. Based on these assumptions, it was estimated that to achieve 80% power to detect a statistically significant difference at the 5% level of significance, given a large effect size ( $f = .54$ ), a minimum sample size of 36 (12 participants in each group) was required.

### *Measures*

#### *Means-End Problem-Solving Procedure (MEPS; Platt & Spivack, 1975a; appendix 4.2)*

The MEPS was used to assess interpersonal problem-solving. Studies conducted with the MEPS support its discriminant, content and construct validity (Platt & Seigel, 1975; Platt & Spivack, 1975a, 1975b). It has also been demonstrated to have satisfactory levels of internal consistency ( $r = .82$  to  $.84$ , Platt & Spivack, 1975a). In accordance with Platt & Spivack (1975b) and recent usage, six MEPS stories were used, to reduce testing time for participants. Stories that contained antisocial goals or referred to problems within the workplace were omitted. In order to take account of the criticisms discussed above,

participants were instructed to "provide the ideal strategy for overcoming the problem" (Marx et al., 1992) rather than to "make up a story". Responses were scored according to:

1. NUMBER OF RELEVANT MEANS (Platt & Spivack, 1975a). The total number of relevant means generated by each subject.
2. RELEVANCY SCORE (Platt & Spivack, 1975a). The proportion of responses that were relevant (calculated by dividing the number of relevant means by the number of relevant, irrelevant and no means).
3. QUOTIENT OF APPROPRIATE MEANS (Kehrer & Linehan, 1996). The proportion of story-directed responses that were adaptive (calculated by dividing the number of appropriate relevant means by the total number of relevant and irrelevant means).
4. QUOTIENT OF INAPPROPRIATE MEANS (Kehrer & Linehan, 1996). The proportion of story-directed responses which were maladaptive. This included all incidents of crime, suicidal behaviour, substance abuse and lying (calculated by dividing the number of inappropriate relevant means by the total number of relevant and irrelevant means).
5. QUOTIENT OF ACTIVE MEANS (Linehan et al., 1987). The proportion of means where the participant described initiating the behaviour (calculated by dividing the number of active relevant means by the total number of relevant and irrelevant means).
6. QUOTIENT OF PASSIVE MEANS (Linehan et al., 1987). The proportion of means where the participant did not describe initiating the behaviour (calculated by dividing the number of passive relevant means by the total number of relevant and irrelevant means).

7. EFFECTIVENESS OF RELEVANT MEANS (Evans et al., 1992). Each item for which relevant means were generated was scored 0 (not effective), 1 (effective) or 2 (very effective). The scores were summed and divided by the number of stories for which relevant means were provided. This method allowed for equitable comparison between participants who provided relevant means for different numbers of items.

All MEPS transcripts were scored by the author, and a random sample of 20% was scored by an independent rater (a post-graduate Psychologist). Inter-rater reliability for the seven MEPS scores was acceptable (Spearman's rho,  $r = .76$  to  $r = .94$ ,  $p < .05$ ). Where there was discrepancy the raters reached an agreement on which score to use.

*Semi-Structured Interview (appendix 4.3)* This was used to obtain information on age, ethnicity, marital status, postcode (which was later transformed to a deprivation category score, Carstairs & Morris, 1991), employment status, medication, history of head injury, alcohol consumed in the past 24 hours, relevant medical history and life events in the past year.

*Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I; First, Spitzer, Gibbon & Williams, 1996)* Section E (Alcohol and other substance use disorders) was used to assess whether individuals met DSM-IV criteria for alcohol dependence. Several studies have reported reasonable levels of inter-rater reliability and concurrent validity for the SCID-I (First et al., 1996).

*Severity of Alcohol Dependence Questionnaire (SADQ; Stockwell, Murphy & Hodgson, 1983; appendix 4.4)* In order to control for severity of dependence, this 20-item multiple-choice questionnaire was administered to all participants who met DSM-IV criteria for alcohol dependence. Its test-retest reliability ( $r = .85$ ) and construct validity ( $r = .41$  to  $.81$ ) have been demonstrated (Stockwell et al., 1983).

*Windsor Clinic Alcohol Withdrawal Assessment Scale (WCAWAS; Metcalfe et al., 1995; appendix 4.5)* This 10-item clinician-administered checklist was used to control for severity of the alcohol withdrawal syndrome in participants with alcohol dependence. It has satisfactory inter-rater reliability ( $r = .84$ ) and concurrent validity ( $r = .85$ , Metcalfe et al., 1995).

*Parasuicide History Interview (Linehan, Wagner & Cox, 1989; appendix 4.6)* This brief semi-structured interview was used to obtain information on parasuicidal history.

*Beck Scale for Suicide Ideation (Beck, Kovacs & Weissman, 1979)* This was used to screen for current suicidal ideation. The complete scale has demonstrated internal consistency (Cronbach's Alpha,  $.89$ ), concurrent validity ( $r = .41$ ), discriminative validity ( $t = 4.14, p < .001$ ) and construct validity ( $r = .47, p < .001$ ) (Beck et al., 1979). In order to reduce testing time, a shortened version was used (appendix 4.7).

*Beck Hopelessness Scale (BHS; Beck, Weissman, Lester & Trexler, 1974; appendix 4.8)*

This 20-item true/false scale was used to control for hopelessness. It has demonstrated internal consistency ( $r = .93$ ) and concurrent validity ( $r = .62$ , Beck et al., 1974).

*Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983)* The HADS was used to control for levels of depression and anxiety. It was developed and standardised on a hospitalised adult population, and scores are unaffected by physical illness. It has a reported internal consistency of  $r = .30$  to  $.76$  and acceptable concurrent validity for both the depression ( $r = .70$ ) and anxiety ( $r = .74$ ) sub-scales (Zigmond & Snaith, 1983).

*Neuropsychological Screening* Since alcohol abuse, withdrawal effects and the drugs used for self-poisoning may have affected cognitive functioning, brief neuropsychological screening was conducted. Five psychometric tests were administered. These are internationally recognised tests with demonstrated validity and reliability.

- (1) National Adult Reading Test, Second Edition (NART; Nelson, 1991): to provide an estimate of pre-morbid intellectual functioning.
- (2) Wechsler Adult Intelligence Scale- Third Edition (WAIS-III, Wechsler, 1998a), Digit Span sub-test: to measure attention/concentration and sequencing abilities.
- (3) WAIS-III (Wechsler, 1998a), Digit Symbol sub-test: to assess psychomotor speed and mental alertness.



(4) Wechsler Memory Scale-Third edition (WMS-III, Wechsler, 1998b), Word Lists sub-test: an auditory-verbal learning task, which is a robust and sensitive measure of memory functioning.

(5) The Hayling and Brixton Tests (Burgess & Alderman, 1993): to assess executive functioning.

### *Procedure*

Ward staff identified potential participants. They were provided with an information sheet and were given the opportunity to ask questions. Once written consent was obtained, the above measures were conducted during one session with the researcher. The session lasted 75 to 120 minutes, with a break halfway through if requested. At the end of the session the participants' emotional response to the procedure was assessed. If significant levels of distress or psychological disorder was uncovered, participants were advised to attend their General Practitioner, who was informed of the circumstances. Ward staff were informed of previously unrecognised suicidal ideation. All participants' General Practitioners were informed of their participation.

## RESULTS

### *Characteristics of the sample*

All parasuicidal participants had used self-poisoning as a means of self-harm. Intent to die was reported by 80% ( $N=12$ ). Three participants in the parasuicidal group and one participant in the alcohol dependent group also met criteria for drug abuse.

Other demographic and clinical characteristics of each group are presented in Table 1. There were no differences between the groups in ethnicity, marital status or socio-economic status. However, participants in the parasuicidal group were significantly younger than those in the alcohol control group, and fewer participants in the parasuicidal group than in the non-dependent control group were employed.

The parasuicidal group scored significantly higher on measures of hopelessness, life events and alcohol consumed in the past 24 hours than both control groups. The alcohol control group also scored significantly greater on hopelessness and life events than the non-dependent control group. The parasuicidal group and alcohol control group were equivalent in terms of depression, anxiety and head injuries, but both groups scored greater on these measures than the non-dependent control group. There were no significant differences between the parasuicidal group and the alcohol control groups on measures of severity of dependence or withdrawal effects. Finally, significantly more participants in the parasuicidal group than in either control group reported a history of parasuicide, and significantly more participants in the alcohol control group than in the non-dependent control group had such a history. Within the alcohol control group, 53% ( $N$

= 8) reported a history of parasuicide, on average 12 years (SD = 12.24, range 5 - 40) prior to participation.

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Insert Table 1 about here  
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Neuropsychological characteristics of the sample are presented in appendix 4.9. There were no significant differences between the groups on any of the neuropsychological measures, except that the alcohol control group scored significantly less on the Brixton Test than the non-dependent control group (Kruskal-Wallis,  $X^2 = 9.77, p < .01$ ; post hoc Mann Whitney Test,  $U = 40, p < .01$ ).

*Relationships between variables*

Pearson's Product Moment was calculated to examine the relationships between MEPS performance (relevancy score) and clinical and neuropsychological variables. Pre-morbid intellectual functioning, as assessed by the NART, was not significantly correlated with the relevancy score ( $r = .29, n.s.$ ). However MEPS performance was related to scores on Word Lists - Immediate Recall, Delayed Recall and Recognition ( $r = .54, .38, .33, p < .01$ ), Digit Symbol ( $r = .42, p < .01$ ) and the Hayling test ( $r = .40, p < .01$ ). MEPS performance was also associated with hopelessness ( $r = -.41, p < .01$ ), depression ( $r = -.28, p < .05$ ), anxiety ( $r = -.34, p < .05$ ) and number of life events ( $r = -.31, p < .05$ ). It was

not related to alcohol consumed ( $r = -.17$ , n.s.), severity of dependence ( $r = .01$ , n.s.) or withdrawal effects ( $r = -.36$ , n.s.).

*Interpersonal problem-solving*

Group scores on each of the MEPS outcome variables are presented in Table 2. Where MEPS variables were normally distributed with equal variances, one-way ANOVA was conducted. Otherwise, Kruskal-Wallis tests were used. Since the MEPS outcome variables were inter-dependent, the Bonferroni method of correction was applied to the significance level. Test statistics were therefore required to be associated with  $p < .01$  to be considered statistically significant. There were no significant differences between the groups on any of the MEPS outcome measures (see Table 2).

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Insert Table 2 about here

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Analysis of co-variance (ANCOVA) was also conducted on the normally distributed MEPS outcome variables to control for variables that differed between the groups. Hopelessness, depression, age, and scores on the Brixton test were used as co-variates. Anxiety and number of life events were not entered as separate co-variates because they were correlated with depression ( $r = .79$ ,  $p < .01$ ;  $r = .48$ ,  $p < .01$  respectively) and hopelessness. ( $r = .68$ ,  $p < .01$ ;  $r = .58$ ,  $p < .01$ , respectively). Number of head injuries

and amount of alcohol consumed were not included as co-variables because they were not significantly correlated with the MEPS outcome variables. A Bonferroni correction was also applied to the ANCOVA analyses. Test statistics were therefore required to be associated with  $p < .01$  to be considered statistically significant. The analysis revealed no significant differences between the groups on number of relevant means ( $F(2, 44) = 1.38$ ,  $p = .27$ ), relevancy score ( $F(2, 44) = 2.11$ ,  $p = .14$ ), quotient of active means ( $F(2, 44) = 3.82$ ,  $p = .03$ ) or effectiveness ( $F(2, 44) = 0.09$ ,  $p = .92$ ).

### *Parasuicidal History and MEPS Performance*

To examine the relationship between previous history of parasuicide and interpersonal problem-solving in the alcohol control group, those with a parasuicide history ( $N = 8$ ) were compared to those with no history ( $N = 7$ ) on MEPS outcome variables. Where MEPS variables were normally distributed with equal variances, Independent  $t$  tests were used. Otherwise, Mann-Whitney tests were used. No significant differences were found on number of relevant means ( $t(13) = 0.78$ , n.s.), relevancy score ( $t(13) = 1.37$ , n.s.), quotient of active means ( $t(13) = 0.93$ , n.s.), quotient of passive means ( $U = 25$ , n.s.), quotient of appropriate means ( $U = 25$ , n.s.), quotient of inappropriate means ( $U = 22$ , n.s.) or effectiveness ( $U = 26$ , n.s.).

## DISCUSSION

No differences in means-end problem-solving were found between an alcohol dependent parasuicidal group, an alcohol dependent control group and a non-dependent control group. This was the case even when the effects of confounding variables, including hopelessness and depression, were controlled. The results of this study do not support the hypothesis that men with alcohol dependence who engage in parasuicide have poorer interpersonal problem-solving skills than alcohol dependent controls and that alcohol dependent controls have poorer interpersonal problem-solving skills than non-dependent controls.

There are several possible explanations for these non-significant results. It may be that interpersonal problem-solving is not related to parasuicide in the alcohol dependent population. It is also possible that this study failed to detect an existing difference due to the nature of the groups used. Finally, it may be suggested that aspects of interpersonal problem-solving not assessed by the MEPS are relevant to the parasuicidal behaviour of this population.

Firstly, the current results suggest that interpersonal problem-solving may not be related to parasuicide in the alcohol dependent population. This relationship has not previously been tested in an alcohol dependent population, and it is interesting to note that studies that have examined this relationship in adolescent samples have also produced conflicting results (see Wilson et al., 1995). It has been suggested that the interpersonal model of problem-solving may not be as applicable in the adolescent population as in

adult groups (Wilson et al., 1995). This may also be the case for the alcohol dependent population.

Secondly, it is possible that this study failed to detect an existing difference in interpersonal problem-solving between the groups because of the size and nature of the groups used. Since the hypothesis of this study had not previously been tested in an alcohol dependent sample, *a priori* power calculations were based on studies using the MEPS with non-dependent samples. However, *post hoc* power analysis, based on the mean relevancy scores achieved in the current study, indicated that there was a smaller effect size in this alcohol dependent sample ( $f = .41$ ) than previously found in non-dependent groups ( $f = .54$ ). There was therefore insufficient power to detect significant differences between the groups (power = .66). A sample of 63 participants would have been required to achieve an acceptable level of power (power = .80). Given the insufficient power and the non-significant trends found, it seems likely that this study may have failed to detect an existing difference between the groups.

There were also some confounding variables within the samples. Half of the participants in the alcohol dependent control group reported histories of parasuicide. Although interpersonal problem-solving deficits have been shown to be a state concomitant of parasuicide rather than a trait characteristic (e.g. Biggam & Power, 1999; Schotte, Cools & Payvar, 1990), and there were no differences in MEPS performance between those with and without histories of parasuicide, this may have confounded the results. Also, the non-dependent control group in this study generated fewer relevant means on the MEPS than control groups in other studies. This hospitalised group may have had impaired interpersonal problem-solving, which may have also confounded the

results. These methodological limitations may have masked a genuine difference in interpersonal problem-solving between the groups.

Finally, it is recognised that means-end thinking is only one of the skills required for successful interpersonal problem-solving. While men with alcohol dependence who engage in parasuicide may not be deficient in means-end thinking, they may have deficits in other parts of the interpersonal problem-solving process, such as identifying the problem, generating alternative solutions and implementing social strategies (House & Scott, 1996). There is some evidence that this may be the case. People with alcohol dependence have been found to be inferior to controls when asked to provide their typical response to an interpersonal problem, but to be equivalent when asked to generate the optimal solution (Nixon et al., 1992; Patterson et al., 1988). This suggests that, as a group, people with alcohol dependence are unimpaired in generating means of solving interpersonal problems, but have difficulty in applying these to their everyday life. This difficulty in the implementation of solutions may be related to parasuicide. It is also possible that individuals' perception of their own problem-solving skill is of more significance to parasuicide than their actual skill level, within this population. Indeed, studies which have examined problem-solving appraisal in non-dependent samples have found that it is predictive of suicidal ideation, and that it is only moderately correlated with actual skill level (Dixon et al., 1994; Rudd et al., 1994). Therefore elements of interpersonal problem-solving that are not assessed by the MEPS may be significant in the parasuicidal behaviour of this population.

Further research replicating the current study and addressing the methodological limitations described above, is necessary in order to clarify the relationship between



means-end thinking and parasuicide in the alcohol dependent population. The examination of other aspects of interpersonal problem-solving, such as the implementation of strategies and self-appraisal of problem-solving skill, may also yield important results.

It is interesting to note that in the current study, the parasuicidal sample had greater scores on measures of hopelessness and life events than both control groups. The alcohol control group also had greater scores on these measures than non-dependent controls. This is consistent with an explanation that increased levels of hopelessness and negative life events in alcohol dependent populations are two of the factors that place them at increased risk of suicidal behaviour. This confirms previous research on hopelessness, life events and suicidal behaviour in alcohol dependent samples (Hewitt et al., 1998; Pirkola et al., 2000), although further replication of these results is necessary.

The current study differed from existing research on parasuicide in its focus on participants with alcohol dependence. The effects of the alcohol withdrawal syndrome are a common difficulty in research utilising such samples, since withdrawal is often associated with temporary cognitive deficits (Lezak, 1995) and physical and psychological disturbance (Metcalf et al., 1995). In the current study, those with severe withdrawal symptoms were excluded and the parasuicidal and alcohol control groups were comparable on measures of severity of dependence and withdrawal effects. Group differences on measures of anxiety, depression and hopelessness were statistically controlled. Neuropsychological testing was also conducted. The groups were found to be equivalent on the majority of measures of cognitive functioning, and group differences in executive functioning were statistically controlled. The analysis of neuropsychological test results was conducted using scaled scores rather than raw scores, in order to control

for the confounding effect of age. However, this may have reduced the variability in the data and artificially decreased the magnitude of any differences between the groups. Consequently, group differences were less likely to be detected as statistically significant, although they may have been clinically relevant. Despite this limitation it is argued that this study adequately controlled for withdrawal effects.

Research utilising the MEPS has also been criticised because of the potential confounding influence of intelligence and general cognitive functioning. The neuropsychological tests in this study also controlled for this effect. It is interesting to note that performance on the MEPS was not related to general intelligence, but moderate relationships were found with executive functioning (Hayling test) verbal memory (Word Lists), psychomotor speed and mental alertness (Digit Symbol). Future research using the MEPS may benefit from specifically controlling for these cognitive functions.

### *Conclusion*

The hypothesis that people with alcohol dependence and a recent episode of parasuicide have poorer interpersonal problem-solving skills than alcohol dependent controls and non-dependent controls was not supported in this study. This may be because the methodological limitations of this study masked an existing difference. However, it is also possible that interpersonal problem-solving is not a correlate of parasuicide in this population, or that aspects of interpersonal problem-solving not assessed by the MEPS are relevant. Further research is necessary to clarify this issue.

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Table 1: Demographic and Clinical Variables by Group

VARIABLE	GROUP			DIFFERENCES	
	PARASUICIDAL (N = 15)	ALCOHOL CONTROL (N = 15)	NON-DEPENDENT CONTROL (N = 15)	STATISTIC	SIGNIFICANCE
Age Mean (SD)	35 12.7	50 9.9	42 11.7	$F(2, 42) = 4.98$	$p < .05^a$
Ethnicity White Pakistani	15 0	15 0	15 1	$X^2 = 1.03$	n.s.
Marital Status Single / Separated / Divorced Married / Co-habiting	11 4	10 5	6 9	$X^2 = 3.89$	n.s.
Socio-Economic Status Depcat 1 - 5 Depcat 6 - 7	3 12	2 13	8 7	$X^2 = 0.24, 0.68, 1.67^b$	n.s., n.s., n.s.
Employment Status Employed Unemployed / Retired	2 13	3 12	8 7	$X^2 = 0.24, 3.59, 5.4^b$	n.s., n.s., $p < .05$
History of Parasuicide Yes No	13 2	8 7	0 0	$X^2 = 23.04$	$p < .001$
Beck Hopelessness Scale Mean (SD)	12.6 (4.5)	8.4 (4.9)	4.5 (2.7)	$F(2, 42) = 14.303$	$p < .001^c$
Hospital Anxiety and Depression Scale - Depression Mean (SD)	10.9 (3.6)	9.7 (3.9)	3.7 (3.3)	$F(2, 42) = 17.094$	$p < .001^d$

<sup>a</sup> post hoc analysis with Tukey's Honestly Significant Difference (HSD) Test revealed the parasuicidal group was younger than the alcohol control group ( $p < .05$ )

<sup>b</sup> Fishers Exact Test was conducted on pairs of groups: parasuicidal Vs alcohol control group, alcohol control Vs non-dependent group, and parasuicidal Vs non-dependent group respectively

<sup>c</sup> post hoc Tukey's HSD indicated the parasuicidal group had higher scores than the alcohol control group ( $p < .05$ ) and the non-dependent group ( $p < .001$ ), and that the alcohol control group had higher scores than the non-dependent group ( $p < .05$ )

<sup>d</sup> post hoc Tukey's HSD indicated the non-dependent group had lower scores than the parasuicidal group ( $p < .001$ ) and the alcohol control group ( $p < .001$ )

Table 1: Demographic and Clinical Variables by Group... continued

VARIABLE	GROUP		DIFFERENCES	
	PARASUICIDAL (N = 15)	ALCOHOL CONTROL (N = 15)	NON-DEPENDENT CONTROL (N = 15)	SIGNIFICANCE
Hospital Anxiety and Depression Scale - Anxiety Mean (SD)	15.5 ( 2.9)	12.7 (5.3)	6.3 (4.3)	$p < .001^e$
Number of Life Events Mean (SD)	5.5 (1.7)	3.9 ( 1.7)	2.3 (0.88)	$p < .001^f$
Number of Head Injuries Mean (SD)	1.6 (1.5)	4 (10.1)	0.33 (0.62)	$p < .05^g$
Units of Alcohol consumed in past 24 hours Mean (SD)	21.4 (14.4)	2 (6.3)	3.8 (10.3)	$p < .001^h$
Severity of Alcohol Dependence Questionnaire Score Mean (SD)	34.2 (12.0)	40.3 (13.9)	N/A	n.s.
Windsor Clinic Alcohol Withdrawal Assessment Scale Score Mean (SD)	4.8 (2.5)	2.9 (2.7)	N/A	n.s.

<sup>e</sup> post hoc Tukey's HSD indicated the non-dependent group had lower scores than the parasuicidal group ( $p < .001$ ) and the alcohol control group ( $p < .01$ )

<sup>f</sup> post hoc Tukey's HSD indicated the parasuicidal group had more life events than the alcohol control group ( $p < .05$ ) and the non-dependent group ( $p < .001$ ) and that the alcohol control group had more life events than the non-dependent group ( $p < .01$ )

<sup>g</sup> post hoc Mann Whitney test indicated the non-dependent group had fewer head injuries than the parasuicidal group ( $p < .01$ ) and the alcohol control group ( $p < .05$ )

<sup>h</sup> post hoc Mann Whitney test indicated the parasuicidal group had consumed more alcohol than the alcohol control group ( $p < .001$ ) and the non-dependent group ( $p < .001$ )

Table 2: Group Differences in Means-End Problem Solving Procedure

MEPS VARIABLE	GROUP		DIFFERENCES	
	PARASUICIDAL (N = 15) Mean (SD)	ALCOHOL CONTROL (N = 15) Mean (SD)	NON-DEPENDENT CONTROL (N = 15) Mean (SD)	SIGNIFICANCE
Number of Relevant Means	8.07 (4.15)	11.13 (5.88)	11.6 (4.01)	$F(2, 42) = 2.44$  $p = .10$
Relevancy Score	0.75 (0.16)	0.83 (0.16)	0.89 (0.15)	$F(2, 42) = 3.21$  $p = .05$
Quotient Appropriate Means	0.84 (0.16)	0.89 (0.13)	0.95 (0.11)	Kruskal-Wallis $\chi^2 = 7.61$  $p = .02$
Quotient Inappropriate Means	0.01 (0.03)	0.02 (0.04)	0	Kruskal-Wallis $\chi^2 = 5.36$  $p = .07$
Quotient Active Means	0.69 (0.15)	0.79 (0.17)	0.85 (0.15)	$F(2, 42) = 4.07$  $p = .02$
Quotient Passive Means	0.16 (0.17)	0.11 (0.19)	0.1 (0.11)	Kruskal-Wallis $\chi^2 = 1.63$  $p = .44$
Effectiveness	1.29 (0.2)	1.36 (0.36)	1.21 (0.27)	$F(2, 42) = 1.01$  $p = .37$

**CHAPTER 5. SINGLE SUBJECT RESEARCH STUDY ABSTRACT****Reports of Headache in an Eight-Year-Old Girl:****Pain or Behaviour?****Clare Parkinson**

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow, G12 0XH*

**Reports of Headache in an Eight-Year-Old Girl:  
Pain or Behaviour?**

**Clare Parkinson \***

*Department of Psychological Medicine,  
Gartnavel Royal Hospital, Glasgow, G12 0XH.*

**Running title:** Childhood Headache as Functional Behaviour

\* Requests for reprints

## ABSTRACT

The treatment of choice for paediatric headache is medication combined with relaxation and biofeedback training. However, pain is a subjective experience communicated to others through pain behaviours, e.g. verbal report and grimacing. Pain behaviours may be shaped by environmental contingencies and maintained in a child's repertoire in the absence of physical pain. In this case, a behavioural modification programme is a more appropriate intervention. Clinicians may be faced with a dilemma regarding the extent to which pain behaviour should be approached as "pain" or "behaviour". This study used single-case methodology to test the hypothesis that the headache reports of an eight-year old girl had a significant behavioural component, and therefore contingency management would effect a reduction in reported headache activity. Using an ABAB experimental design, maternal non-reinforcement of pain behaviour and provision of attention that was non-contingent on headache behaviour was implemented, withdrawn and re-implemented. The results indicated a clinically significant reduction in reported frequency, duration and severity of headache behaviour and tantrums during the contingency management conditions and an increase during the reversal phase. It is suggested that this child's report of headaches may have been functional, although methodological limitations are discussed. Clinical implications and directions for further research are highlighted.

**Key Words:** Behaviour, Childhood, Headache, Single-Case Methodology



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**Appendix 1. Small Scale Service Evaluation Project**

Appendix 1.1

Clinical Rehabilitation

Derick T Wade, Oxford, UK

*Clinical Rehabilitation* is a multi-professional journal which covers the whole field of disability and rehabilitation. It publishes research and discussion articles which are scientifically sound, clinically relevant and sometimes provocative. The journal is published bi-monthly.

The journal is a forum for the dissemination and exchange of information around the world between the large number of professions involved in rehabilitation such as bioengineers, sociologists, physiotherapists, occupational therapists, speech and language therapists, nurses and doctors. The information is relevant to the rehabilitation of a wide range of disabled people, from children to the elderly with any underlying disease.

*Clinical Rehabilitation* is the official journal of the British Society of Rehabilitation Medicine (BSRM), and of the Netherlands Society of Rehabilitation and Physical Medicine (VRA) and the Scientific Society for Research into Rehabilitation in the Netherlands (WGR). It is published in association with the Society for Research in Rehabilitation (SRR). The journal is now cited in ISI Current Contents (clinical Medicine).

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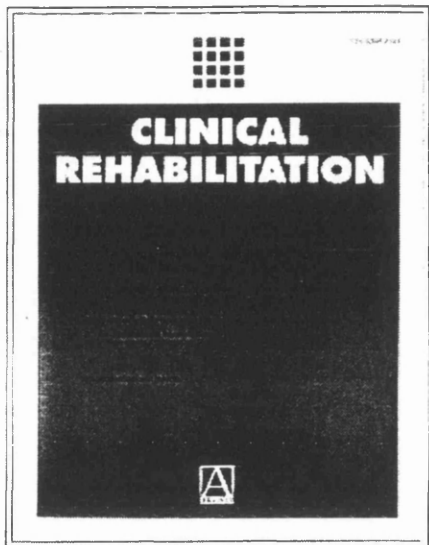
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### Notes for Authors:

*Clinical Rehabilitation* is a quarterly international  
 journal which aims to publish the best scientific research  
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## Appendix 1.1

rehabilitation. Articles must also be readable, enjoyable and easily understood because the journal is aimed at an international and multidisciplinary audience.

The Editor gives highest priority to articles which give evidence (positive or negative) on the effectiveness of any intervention (bioengineering, equipment, special techniques etc), especially randomized controlled trials. However, the Editor always welcomes articles on: the epidemiology of disabling conditions; the organization and planning of rehabilitation services; the measurement or assessment of impairment, disability, or handicap; any relevant clinical case studies; and the natural history and prognosis of disabling disorders. Papers describing specific techniques will also be considered.

These guidelines aim to help authors write acceptable papers. Should you have any queries please do not hesitate to contact the Editor: Dr Derick T. Wade, Consultant in Neurological Disability, Rivermead Rehabilitation Centre, Abingdon, Oxford OX1 4XD, UK. Telephone: +44 (0)1865 240321; Fax: +44 (0)1865 200185 e-mail: [derick.wade@dial.pipex.com](mailto:derick.wade@dial.pipex.com)

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All articles should be as short and concise as possible consistent with conveying all necessary ideas and facts. In general, articles of over 3000 words will be too long, and articles of 400-1000 words are always welcome. Authors can always discuss this matter with the editor.

**The typescript** should be prepared on good quality A4 or quarto paper, double-spaced and with a minimum of 3 cm for left- and right-hand margins and 5 cm at head and foot. Text should be in standard 12 point. All pages must be numbered. The following layout is preferred.

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Clinical Rehabilitation requires **structured abstracts** wherever possible because they help the reader (and the author) establish the main messages. This involves using some or all of the following headings; not every heading is appropriate in every case, and other headings may be used. Structured abstracts should not exceed 250 words as Medline will truncate after this length.

**Objective.** Purpose of the study

**Design.** How was purpose achieved.

**Setting.** Where was study undertaken.

**Subjects.** Who was studied.

**Interventions.** What was done.

## Appendix 1.1

**Main outcome measures.** Outcome measures and others.

**Results.** Main data.

**Conclusions.** Related to objective if possible.

Thereafter most research articles should follow the standard lay out and be presented in this order.

**Introduction.** Usually 2-4 paragraphs, justifying the study and referring to important earlier work. The reader should learn why your study was needed, and how it relates to previous work.

**Methods.** This should describe what you did (and why) in sufficient detail to enable replication. Consider how subjects were recruited, design of study, measures used, how measures were taken (who did it), how bias was countered, and types of analysis. Describe the statistical methods used. State (if true and relevant) that the study had the approval of local ethical committees. Flow diagrams are often helpful, and should be given for all studies of interventions. (see Rennie, *Jama* 1996; 276: 637-39 or Altman, *BMJ* 1996; 313: 570-71)

**Results.** Give the data and other results. Give actual numbers not simply percentages. Use Tables and Figures but remember that they take up space and words can be better. Think carefully about how you present your data.

**Discussion.** Do not forget to discuss the weaknesses in your study, as well as drawing any conclusions from your study.

**Acknowledgements.** Funding agents, advisors etc. If over four authors, should some be acknowledged instead? See later about authorship.

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**References.** These should always be relevant: more is not necessarily better. They should be numbered in the order in which they appear in the text in the 'Vancouver style' (1): for **articles**, give names and initials of all authors (unless more than six, in which case give the first three then *et al.*), the title of the article, the journal title abbreviated according to *Index Medicus*, year of publication, volume number and first and last page number; for **chapters in books** give authors, chapter title, editor(s) of the book, the book title, place of publication, publisher, year of publication and first and last page number. For examples, see below (2- 4):

1 International Committee of Medical Journal Editors. Uniform requirements for manuscripts submitted to biomedical journals. *JAMA* 1993; 277: 927-34.

2 Lowry S, Smith J. Duplication publication. *BMJ* 1991; 304: 999-1000.

3 Huff D. *How to lie with statistics*.

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London: Penguin, 1991  
 4 Wade OL. Research ethical committee.  
 In: Duncan AS, Dunstan GR, Welbourn  
 RB eds. *Dictionary of medical ethics*,  
 second edition. London: Darton,  
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**Scientific measurements** should be given in SI units, but blood pressure should be expressed as mmHg and haemoglobin as g/dl.

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*"authorship should be based only on substantial contributions to: (a) conception and design, or analysis and interpretation of data; (b) draft an article or revising it critically for important intellectual content; and (c) final approval of the version to be published."*

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**Appendix 1.2**

QUESTIONNAIRE NUMBER .....

**PATIENT SATISFACTION QUESTIONNAIRE**



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This page will be removed before your answers are examined.

**IT IS GUARANTEED THAT THE ANSWERS YOU GIVE ARE COMPLETELY ANONYMOUS**

**Appendix 1.2**

Please read through the following statements and tick the answer that is nearest to your view. There are no right or wrong answers; it is your opinion we are interested in.  
*It is important that you answer every question.*

**HOSPITAL CARE AND TREATMENT**

**(1) I have been treated with kindness and respect by staff at the hospital**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

**(2) The staff attended well to my personal needs while I was in hospital; e.g. I was able to get to the toilet whenever I needed.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

**(3) I was able to talk to the staff about any problems that I might have had.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

**(4) I received all the information I wanted about the causes and nature of my illness**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

**(5) The doctors have done everything they can to make me well again.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

Appendix 1.2

(6) I am happy with the amount of recovery I have made.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(7) I am satisfied with the type of treatment the therapists have given me (for example, physiotherapy, speech and language therapy).

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(8) Somebody really listened and understood my needs while I was in hospital

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(9) I did not feel neglected in hospital

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(10) I had enough emotional support in hospital

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(11) I knew who to contact if I had problems relating to my stroke.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree



**Appendix 1.2**

**DISCHARGE AND AFTER**

**(12) I was given all the information I needed about the allowances or services I might need after leaving hospital (e.g. home help, district nurse, meals on wheels).**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(13) Things were well prepared for my return home (e.g. aids such as stair rails or wheelchairs had been organised if necessary).**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(14) I get all the support I need from services such as meals on wheels, home helps, district nursing etc.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(15) I am satisfied with the outpatient services provided by the hospital (e.g. the day hospital appointments with doctors or therapists).**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(16) I think the ambulance service is reliable.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**Appendix 1.2**

**(17) I am satisfied with the practical help I have received since I left hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(18) I have received enough information about recovery and rehabilitation after stroke.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(19) Somebody has really listened and understood my needs and problems since I left hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(20) I have felt neglected since I left hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(21) I have had enough emotional support since I left hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(22) I have received enough special equipment (e.g. rails, wheelchair, commode etc.)**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

Appendix 1.2

(23) I know who to contact if I have problems related to my stroke.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree







**Appendix 1.2**

**COMMENTS:**

**Is there anything else you would like to tell us about your experience of The Stroke Rehabilitation Unit or support services and follow-up care?**

**You may like to use this space to comment on an aspect of care with which you were particularly satisfied or dissatisfied.**

**THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THIS  
QUESTIONNAIRE.**

**Appendix 1.3**

QUESTIONNAIRE NUMBER .....

**CARER SATISFACTION QUESTIONNAIRE**



You will note that this questionnaire has been numbered. This is simply for the purpose of follow-up, so that we can send you a reminder letter, should you forget to return your form.

This page will be removed before your answers are examined.

**IT IS GUARANTEED THAT THE ANSWERS YOU GIVE ARE COMPLETELY ANONYMOUS**

### Appendix 1.3

Please read through the following statements and tick the answer that is nearest to your view. There are no right or wrong answers; it is your opinion we are interested in.

*It is important that you answer every question.*

#### HOSPITAL CARE AND TREATMENT

**(1) The patient has been treated with kindness and respect by staff at the hospital**

☐  
Strongly  
Agree

☐  
Agree

☐  
Disagree

☐  
Strongly  
Disagree

**(2) The staff attended well to the patient's personal needs while he/she was in hospital; e.g. he/she was able to get to the toilet whenever he/she needed.**

☐  
Strongly  
Agree

☐  
Agree

☐  
Disagree

☐  
Strongly  
Disagree

**(3) I was able to talk to the staff about any problems that the patient might have had.**

☐  
Strongly  
Agree

☐  
Agree

☐  
Disagree

☐  
Strongly  
Disagree

**(4) I received all the information I wanted about the causes and nature of the patient's illness**

☐  
Strongly  
Agree

☐  
Agree

☐  
Disagree

☐  
Strongly  
Disagree

**(5) The doctors have done everything they can to make the patient well again.**

☐  
Strongly  
Agree

☐  
Agree

☐  
Disagree

☐  
Strongly  
Disagree

Appendix 1.3

(6) I am happy with the amount of recovery the patient has made.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(7) I am satisfied with the type of treatment the therapists have given the patient (for example, physiotherapy, speech and language therapy)

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(8) Somebody really listened and understood my needs while the patient was in hospital

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(9) I did not feel neglected while the patient was in hospital

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(10) I had enough emotional support while the patient was in hospital

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree

(11) I knew who to contact if I had problems relating to the patient's stroke.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly Agree	Agree	Disagree	Strongly Disagree



### Appendix 1.3

#### **DISCHARGE AND AFTER**

- (12) I was given all the information I needed about the allowances or services the patient might need after leaving hospital (e.g. home help, district nurse, meals on wheels).**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

- (13) Things were well prepared for the patient's return home (e.g. aids such as stair rails or wheelchairs had been organised if necessary).**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

- (14) The patient gets all the support he/she needs from services such as meals on wheels, home helps, district nursing etc.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

- (15) I am satisfied with the outpatient services provided by the hospital (e.g. the day hospital appointments with doctors or therapists).**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

- (16) I think the ambulance service is reliable.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**Appendix 1.3**

**(17) I am satisfied with the practical help the patient has received since leaving hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(18) I have received enough information about recovery and rehabilitation after stroke.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(19) Somebody has really listened and understood my needs and problems since the patient left hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(20) I have felt neglected since the patient left hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(21) I have had enough emotional support since the patient left hospital.**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

**(22) The patient has received enough special equipment (e.g. rails, wheelchair, commode etc.)**

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree

Appendix 1.3

(23) I know who to contact if I have problems related to the patient's stroke.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly	Agree	Disagree	Strongly
Agree			Disagree







**Appendix 1.3**

**COMMENTS:**

**Is there anything else you would like to tell us about either your or the patient's experience of The Stroke Rehabilitation Unit or support services and follow-up care?**

**You may like to use this space to comment on an aspect of care with which you were particularly satisfied or dissatisfied.**

**THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THIS  
QUESTIONNAIRE.**

**Appendix 2. Major Research Project Literature Review**

## Appendix 2.1

### NOTES FOR CONTRIBUTORS

1. The *British Journal of Clinical Psychology* publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour, e.g. neuropsychology, age associated CNS changes and pharmacological (in the later case an explicit psychological analysis is also required), through studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis. The general focus of studies in an abnormal behaviour such as that described and classified by current diagnostic systems (ICD-10, DSM-IV) but it is not bound by the exclusive use of such diagnostic systems. The Journal is catholic with respect to the range of theories and methods used to answer substantive scientific problems. Studies of samples with no current psychological disorder will only be considered if they have a direct bearing on clinical theory or practice.
2. The following types of paper are invited:
  - (a) Papers reporting original empirical investigations.
  - (b) Theoretical papers, provided that these are sufficiently related to empirical data.
  - (c) Review articles which need not be exhaustive, but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications.
  - (d) Brief Reports and Comments (see paragraph 6).
 Case studies are normally published only as Brief Reports. Papers are evaluated in terms of their theoretical importance, contributions to knowledge, relevance to the concerns of practising clinical psychologists, and readability. Papers generally appear in order of acceptance, except for the priority given to Brief Reports and Comments.
3. The circulation of the Journal is worldwide, and papers are reviewed by colleagues in many countries. There is no restriction to British authors, and papers are invited from authors throughout the world.
4. The editors will reject papers which evidence discriminatory, unethical or unprofessional practices.
5. Papers should be prepared in accordance with The British Psychological Society's *Style Guide*, available at £3.50 per copy from The British Psychological Society, St Andrews House, 48 Princess Road East, Leicester LE1 7DR, England. Contributions should be kept as concise as clarity permits, and illustrations kept as few as possible. Papers should not normally exceed 5000 words. A structured abstract of up to 250 words should be provided (see Volume 35(2), pp. 323 (1996), for details). The title should indicate exactly but as briefly as possible the subject of the article, bearing in mind its use in abstracting and indexing systems.
  - (a) Contributions should be typed in double spacing with wide margins and only on one side of each sheet. Sheets should be numbered. The top copy and at least three good duplicates should be submitted and a copy should be retained by the author.
  - (b) This journal operates a policy of blind peer review. Papers will normally be scrutinized and commented on by at least two independent expert referees as well as by the editor or by an associate editor. The referees will not be made aware of the identity of the author. All information about authorship including personal acknowledgements and institutional affiliations should be confined to a removable front page and the text should be free of such clues as identifiable self-citations ('In our earlier work...') The paper's title should be repeated on the first page of the text.
  - (c) Tables should be typed in double spacing on separate sheets. Each should have a self-explanatory title and should be comprehensible without reference to the text. They should be referred to in the text by arabic numerals. Data given should be checked for accuracy and must agree with mentions in the text.
  - (d) Figures, i.e. diagrams, graphs or other illustrations, should be on separate sheets numbered sequentially 'Fig. 1', etc., and each identified on the back with the title of the paper. They should be

carefully drawn, larger than their intended size, suitable for photographic reproduction and clear when reduced in size. Special care is needed with symbols: correction at proof stage may not be possible. Lettering must not be put on the original drawing but upon a copy to guide the printer. Captions should be listed on a separate sheet.

- (e) Bibliographical references in the text should quote the author's name and the date of the publication thus; Hunt (1993). They should be listed alphabetically by author at the end of the article according to the following format:
 

Moore, R. G., & Blackburn, I.-M. (1993). Sociotrophy, autonomy and personal memories in depression. *British Journal of Clinical Psychology*, 32, 460-462.

Steproe, A., & Wardle, J. (1992). Cognitive predictors of health behaviour in contrasting regions of Europe. In C. R. Brewin, A. Steproe, & J. Wardle (Eds.), *European perspectives in clinical and health psychology* (pp. 101-118). Leicester: The British Psychological Society.

 Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full.
- (f) SI units must be used for all measurements, rounded off to practical values if appropriate, with the Imperial equivalent in parentheses (see *BPS Style Guide*).
- (g) Authors are requested to avoid the use of sexist language.
- (h) Supplementary data too extensive for publication may be deposited with the British Library Document Supply Centre. Such material includes numerical data, computer programs, fuller details of case studies and experimental techniques. The materials should be submitted to the Editor together with the article, for simultaneous refereeing.
6. Brief Reports and Comments are limited to two printed pages. These are subject to an accelerated review process to afford rapid publication of research studies, and theoretical, critical or review comments whose essential contribution can be made within a small space. They also include research studies whose importance or breadth of interest is insufficient to warrant publication as full articles, and case reports making a disjunctive contribution to theory or method. Authors are encouraged to append an extended report to assist in the evaluation of the submission and to be made available to interested readers on request to the author. To ensure that the two-page limit is not exceeded, set typewriter margins to 66 characters maximum per line and limit the text, including references and a 100 word abstract, to 150 lines. Figures and tables should be avoided. Title, author and name and address for reprints and data of receipt are not included in the allowance. However deduct three lines from the text each and every time any of the following occur:
  - (a) title longer than 70 characters,
  - (b) author names longer than 70 characters,
  - (c) each address after the first address,
  - (d) each text heading (these should normally be avoided).
 A character is a letter or space. A punctuation mark counts as two characters (character plus space) and a space must be allowed on each side of a mathematical operator.
7. Proofs are sent to authors for correction of print, but not for introduction of new or different material. They should be returned to the Journals Manager as soon as possible. Fifty complimentary copies of each paper are supplied to the senior author on request: further copies may be ordered on a form supplied with the proofs.
8. Authors should consult the Journal editor concerning prior publication in any form or in any language of all or part of their article.
9. Authors are responsible for getting written permission to publish lengthy quotations, illustrations, etc., of which they do not own copyright.
10. To protect authors and journals against unauthorized reproduction of articles. The British Psychological Society requires copyright to be assigned to itself as publisher, on the express condition that authors may use their own material at any time without permission. On acceptance of a paper submitted to The Journal, authors will be requested to sign an appropriate assignment of copyright form.

**Appendix 3. Major Research Project Proposal**

## Appendix 3.1

### **Major Research Project Proposal Guidelines from D. Clin. Psy Course Handbook**

The Research Proposal should be laid out according to the format described below. This format is based upon the application for a mini-grant in Health Services Research (SOHHD – Chief Scientist Office). Trainees may find that forms provided by ethical committees are substantially similar to this and this may be an acceptable alternative format.

- 1.1 Applicants – names and addresses including the names of co-workers and supervisor(s) if known.
- 1.2 Title – no more than 15 words.
- 1.3 Summary – no more than 300 words, including a reference to where the study will be carried out.
- 1.4 Introduction – of less than 600 words summarising previous work in the field, drawing attention to gaps in present knowledge and stating wherever possible how the project will add to knowledge and understanding.
- 1.5 Aims and Hypothesis to be tested – these should wherever possible be stated as a list of questions to which answers will be sought
- 1.6 Plan of investigation – consisting of a statement of the practical details of how it is proposed to obtain answers to the questions posed. The proposal should contain information on Research Methods and Design i.e.
  - 1.6.1 Subjects – a brief statement of inclusion and exclusion criteria and anticipated number of participants
  - 1.6.2 Measures – a brief explanation of interviews/observations/rating scales etc. to be employed, including references where appropriate
  - 1.6.3 Design and Procedure – a brief explanation of the overall experimental design with reference to comparisons to be made, control populations, timing of measurements, etc. A summary chart may be helpful to explain the research process.

1.6.4 Settings and equipment – a statement on the location(s) to be used and resources or equipment which will be employed (if any).

1.6.5 Data analysis – a brief explanation of how data will be collated, stored and analysed.

1.7 Practical Applications – the applicants should state the practical use to which the research findings could be put.

1.8 Timescales – the proposed starting date and duration of the project

1.9 Ethical approval – stating whether this is necessary and, if so, whether it has been obtained.

## Appendix 3.2

### **AN INVESTIGATION OF THE SOCIAL PROBLEM-SOLVING SKILLS OF PEOPLE WITH ALCOHOL PROBLEMS WHO MAY HAVE DELIBERATELY HARMED THEMSELVES**

#### **Information Sheet**

(Version 1: 28/07/00)

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with friends, relatives and your doctor if you wish. Ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this information sheet.

#### **1. WHAT IS THE PURPOSE OF THE STUDY?**

People with alcohol problems may become so distressed that they attempt to deliberately harm themselves. It is important for us to know which particular people are at risk of feeling this way, so that we can help them to find other ways to manage their feelings. This study aims to find out if people with alcohol problems who are better at solving problems in everyday life, and who do not feel hopeless or depressed, are less likely to wish to harm themselves.

#### **2. WHY HAVE I BEEN CHOSEN?**

The study will involve 15 men without alcohol problems who have never deliberately harmed themselves, 15 men who have alcohol problems but have not harmed themselves, and 15 men with alcohol problems who have felt so distressed in the past that they have harmed themselves. You have been chosen because you belong to one of these groups and because you have attended one of the hospitals where the study is taking place.

#### **3. DO I HAVE TO TAKE PART?**

It is up to you to decide whether or not to take part. Your decision will not affect the standard of care you receive **in any way**. If you decide to take part you will be asked to sign a consent form and will be given a copy of the consent form and this information sheet to keep. You will still be free to withdraw at any time and do not have to give a reason.



## Appendix 3.2

### 4. WHAT WILL HAPPEN TO ME IF I TAKE PART?

I will visit you in hospital once. I will ask you questions about your age, postcode, marital status, employment status, and your past and present medical problems. I will also ask about any difficulties in your life in the past year, about your drinking habits, and whether you have ever felt so distressed that you have deliberately harmed yourself. You will be given one questionnaire about your drinking habits and three one-page multiple-choice questionnaires about your emotional state. You will be asked to complete seven problem-solving tasks. During one of these tasks I will **record your answers on audiotape**. In total this will take about one and half hours and you will be given a break halfway through if you would like one. After this there will be no further contact with myself, unless you request it.

### 5. WHAT ARE THE POSSIBLE DISADVANTAGES AND RISKS OF TAKING PART?

It is possible that you may find it upsetting to talk about your feelings, drinking habits, and any times in the past when you have felt so distressed that you have harmed yourself. If this happens, you will be given advice about who to talk to about your feelings. If you wish, I could also write a letter to your General Practitioner to explain that you are having emotional difficulties, if you feel this would help.

### 6. WHAT ARE THE POSSIBLE BENEFITS OF TAKING PART?

Taking part in the study will not affect your normal treatment in any way. There are therefore no direct benefits to you for taking part. However, the information we get from this study will help us to better treat future patients with alcohol problems and patients who may attempt to harm themselves.

### 7. WHAT IF SOMETHING GOES WRONG?

If you wish to complain about any aspect of the way you have been approached or treated during this study, the normal National Health Service complaints mechanisms will be available to you.

### 8. WILL MY TAKING PART IN THIS STUDY BE KEPT CONFIDENTIAL?

All information that is collected about you during the course of the research will be kept strictly confidential. **Your name and address will not be written on any information so that you can not be recognised from it.** All audiotapes will be destroyed at the end of the study. The only exception is that if you tell me something that means that either you or someone else is in danger, I have a duty to inform your doctor. The Consultant in charge of your care has given us permission to invite you to take part in the study. Your GP will also be informed that you have taken part in the study, but will not know any of your responses.

### 9. WHAT WILL HAPPEN TO THE RESULTS OF THE RESEARCH STUDY?

The results of the study will be written up and may be published in a scientific journal. You will not be identified in any report or publication.

## **Appendix 3.2**

### **10. WHO IS ORGANISING AND FUNDING THE RESEARCH?**

The research is being organised by the Doctorate in Clinical Psychology Course at Glasgow University. The researcher is employed as a Trainee Clinical Psychologist by Greater Glasgow Primary Care NHS Trust, and is not being paid for carrying out the study.

### **11. WHO HAS REVIEWED THE STUDY?**

The study has been reviewed by the Ethics Committees of Greater Glasgow Primary Care NHS Trust, Glasgow North University Hospitals NHS Trust, and South Glasgow Hospitals University NHS Trust.

### **12. WHO CAN I SPEAK TO ABOUT THE PROJECT?**

If you would like to speak to an independent advisor about the project you may contact:

Dr Catherine Keogh  
Consultant Clinical Psychologist/ Head of Speciality  
Department of Clinical Psychology  
Southern General Hospital  
1345 Govan Road  
Glasgow G51  
Tel: (0141) 201 2598

**THANK YOU VERY MUCH FOR READING THIS INFORMATION SHEET AND  
CONSIDERING TAKING PART IN THIS STUDY**

Appendix 3.3

Patient Identification Number for this trial:

CONSENT FORM  
(DATE: 28/07/00 VERSION: 1)

AN INVESTIGATION OF THE SOCIAL PROBLEM-SOLVING SKILLS OF PEOPLE WITH ALCOHOL PROBLEMS WHO MAY HAVE DELIBERATELY HARMED THEMSELVES

Researchers: Ms Clare Parkinson, Trainee Clinical Psychologist.  
Dr Kate Davidson, Consultant Clinical Psychologist/Research Tutor

Please initial box

1. I confirm that I have read and understand the information sheet (dated 24/07/00, version 1) for the above study and have had the opportunity to ask questions.

☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

☐

3. I agree to part of my interview with the researcher being recorded on audio tape

☐

4. I agree to take part in the above study.

☐

\_\_\_\_\_  
Name of Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Witness

\_\_\_\_\_  
Date

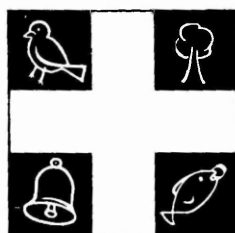
\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name of Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## Appendix 3.4



**GREATER GLASGOW  
PRIMARY CARE  
NHSTRUST**

10 November, 2000

Mc C Parkinson  
Academic Centre  
Gartnavel Royal Hospital  
1055 Gt Western Road  
Glasgow  
G12

Dear Ms Parkinson

**PROJECT: *Interpersonal problem solving skills and parasuicide in males with alcohol abuse or dependence***

Thank you for your letter of 28 August 2000 regarding the above named submission. I have now been able to speak with Dr Fleming and I am pleased to be able to tell you that the Committee now has no objections from an ethical point of view, to this project proceeding and ethical approval is formally granted.

Before your project commences you will also require to obtain management approval via the Research & Development Directorate, Gartnavel Royal Hospital.

I would also like to take this opportunity to remind you that you should notify the Committee if there are any changes, or untoward developments, connected with the study – the Committee would then require to further reconsider your application for approval. The Committee expect to receive a brief regular update every 6 months, and then a brief final report on your project when the study reaches its conclusion. (Failure to keep the Committee abreast of the status of the project can eventually lead to ethical approval being withdrawn)

May I wish you every success with your study.

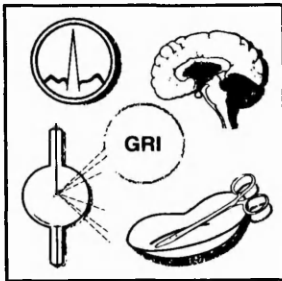
Yours sincerely

**A W McMAHON**  
**Administrator – Research Ethics Committee**

cc B Rae

### Appendix 3.4

RESEARCH



DEVELOPMENT

*Please Reply To -*  
Ms Kerry Adrain, R&D Administrator

Ms Clare Parkinson  
Psychological Medicine  
Academic Centre  
Gartnavel Royal Hospital  
Glasgow  
UK

14 September 2000

Dear Ms Parkinson

#### PROJECT APPROVAL

00ME005

#### Interpersonal Problem-Solving Skills and Parasuicide in Males with Alcohol Dependence.

I am pleased to inform you that the above project has received both ethical and financial approval and may now proceed. The letter from the Ethics Committee is enclosed.

I have recorded the start date for this project as 04 September 2000 .

1304

As this cannot now be correct, I would be grateful if you could let me know when the project will, in fact, commence.

With kind regards

Yours sincerely

Ms Kerry Adrain  
Research & Development Administrator

Cc. Professor J H McKillop, Consultant in Admin Charge, Wards 2/3, Glasgow Royal Infirmary.

## Appendix 3.4



Stobhill NHS Trust  
Balornock Road, Glasgow G21 3UW  
Telephone: 0141-201 3000

Fax No. 0141 201 3891

**RESEARCH ETHICS COMMITTEE**  
Direct Line to secretary: 0141 201 3378

**Please quote Stobhill Protocol No. on all future correspondence**

GB/DRF

1 March 2001

Ms Clare Parkinson  
Trainee Clinical Psychologist  
Division of Clinical Psychology  
University of Glasgow  
Academic Centre  
Gartnavel Royal Hospital  
1055 Great Western Road  
GLASGOW  
G12 0XH

Dear Ms Parkinson

**Re: 00/25 Research Project: Interpersonal Problem Solving Skills and Parasuicide in Males with Alcohol Abuse or Dependence**

Further to your letter of 23 October 2000, I can confirm that the above study was tabled at the Ethics Committee meeting on 5 February 2001 and formal approval was granted.

Yours sincerely

**GAVIN BOYD BSc. (HONS) MD (HONS) FRCP (Edin. & Glas.)**  
Chairman, Research Ethics Committee

1. **STUDY TITLE**  
(Include MREC Ref.)

**LREC. Interpersonal Problem Solving Skills and Parasuicide in Males with Alcohol Abuse or Dependence.**

**3. NAME OF MAIN INVESTIGATOR AND ADDRESS:**

4.	DOCUMENTS REVIEWED	[ ✓ ]	
	PROTOCOL	[ ✓ ]	PROTOCOL AMENDMENTS [ ]
	PATIENT INFORMATION SHEET	[ ✓ ]	PATIENT CONSENT FORM [ ✓ ]
	INVESTIGATOR'S BROCHURE	[ ]	INVESTIGATOR'S C.V. [ ]
	INDEMNITY FORMS	[ ]	ANY OTHER FORMS (SPECIFY) [ ]
	MREC APPROVAL	[ ]	LREC APPLICATION FORM [ ✓ ]
	CTX	[ ]	INTERVIEW SCHEDULES & QUESTIONNAIRES [ ✓ ]
			ANNEXE D [ ]

4[a]	DOCUMENTS REVIEWED	
	PROTOCOL AMENDMENTS	[ ]

## Appendix 3.4

5. APPROVED ☒   
CONDITIONAL APPROVAL ☐   
(SEE BELOW)   
NOT APPROVED ☐   
(SEE BELOW)

COMMENTS

Study approved - clarification required that Physicians on the Victoria Infirmary site are, or will  
.....  
be made aware, of the study and confirmation that the patient is seen the same day as  
.....  
referral, given that the patients are discharged with a quick turnaround period.  
.....  
.....

6. MEMBERS PRESENT ☒

DR. R. NORTHCOTE (CHAIR) ☒DR. R. LEWIS. ☒DR. S. BJORNSSON. ☐MRS. L. MEIKLE. ☒MISS I. REID. ☒

IN ATTENDANCE - MR. D. McGOWAN, SECRETARY.

MRS. D. GLASSER (VICE CHAIR) ☐DR. R. MacLEAN. ☐MRS. V. KIMBLE. ☒MR. A. ROLLAND. ☒

7. VICTORIA INFIRMARY ETHICS COMMITTEE IS ORGANISED AND OPERATES  
ACCORDING TO ICH-GCP GUIDELINES AND APPLICABLE LAWS AND REGULATIONS.

8. ANY OTHER COMMENTS:-

.....  
.....  
.....  
.....

VICTORIA INFIRMARY ETHICS COMMITTEE  
LANGSIDE ROAD,  
GLASGOW, G42 9TY

ETHICS SECRETARY.  
D. McGOWAN.

TEL. 0141.201.6000/0141.201.5371.  
FAX NO: 0141.201.5094

3/9/00



**Appendix 4. Major Research Project Paper**

## Appendix 4.1

### NOTES FOR CONTRIBUTORS

1. The *British Journal of Clinical Psychology* publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour, e.g. neuropsychology, age associated CNS changes and pharmacological (in the later case an explicit psychological analysis is also required), through studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis. The general focus of studies in an abnormal behaviour such as that described and classified by current diagnostic systems (ICD-10, DSM-IV) but it is not bound by the exclusive use of such diagnostic systems. The Journal is catholic with respect to the range of theories and methods used to answer substantive scientific problems. Studies of samples with no current psychological disorder will only be considered if they have a direct bearing on clinical theory or practice.
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  - (d) Brief Reports and Comments (see paragraph 6).

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3. The circulation of the Journal is worldwide, and papers are reviewed by colleagues in many countries. There is no restriction to British authors, and papers are invited from authors throughout the world.
4. The editors will reject papers which evidence discriminatory, unethical or unprofessional practices.
5. Papers should be prepared in accordance with The British Psychological Society's *Style Guide*, available at £3.50 per copy from The British Psychological Society, St Andrews House, 48 Princess Road East, Leicester LE1 7DR, England. Contributions should be kept as concise as clarity permits, and illustrations kept as few as possible. Papers should not normally exceed 5000 words. A structured abstract of up to 250 words should be provided (see Volume 35(2), pp. 323 (1996), for details). The title should indicate exactly but as briefly as possible the subject of the article, bearing in mind its use in abstracting and indexing systems.
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  - (b) This journal operates a policy of blind peer review. Papers will normally be scrutinized and commented on by at least two independent expert referees as well as by the editor or by an associate editor. The referees will not be made aware of the identity of the author. All information about authorship including personal acknowledgements and institutional affiliations should be confined to a removable front page and the text should be free of such clues as identifiable self-citations ('In our earlier work...'). The paper's title should be repeated on the first page of the text.
  - (c) Tables should be typed in double spacing on separate sheets. Each should have a self-explanatory title and should be comprehensible without reference to the text. They should be referred to in the text by arabic numerals. Data given should be checked for accuracy and must agree with mentions in the text.
  - (d) Figures, i.e. diagrams, graphs or other illustrations, should be on separate sheets numbered sequentially 'Fig. 1', etc., and each identified on the back with the title of the paper. They should be carefully drawn, larger than their intended size, suitable for photographic reproduction and clear when reduced in size. Special care is needed with symbols: correction at proof stage may not be possible. Lettering must not be put on the original drawing but upon a copy to guide the printer. Captions should be listed on a separate sheet.
  - (e) Bibliographical references in the text should quote the author's name and the date of the publication thus; Hunt (1993). They should be listed alphabetically by author at the end of the article according to the following format:  
Moore, R. G., & Blackburn, I.-M. (1993). Sociotrophy, autonomy and personal memories in depression. *British Journal of Clinical Psychology*, 32, 460-462.  
Stepcoe, A., & Wardle, J. (1992). Cognitive predictors of health behaviour in contrasting regions of Europe. In C. R. Brewin, A. Stepcoe, & J. Wardle (Eds.), *European perspectives in clinical and health psychology* (pp. 101-118). Leicester: The British Psychological Society.  
Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full.
  - (f) SI units must be used for all measurements, rounded off to practical values if appropriate, with the Imperial equivalent in parentheses (see *BPS Style Guide*).
  - (g) Authors are requested to avoid the use of sexist language.
  - (h) Supplementary data too extensive for publication may be deposited with the British Library Document Supply Centre. Such material includes numerical data, computer programs, fuller details of case studies and experimental techniques. The materials should be submitted to the Editor together with the article, for simultaneous refereeing.
6. Brief Reports and Comments are limited to two printed pages. These are subject to an accelerated review process to afford rapid publication of research studies, and theoretical, critical or review comments whose essential contribution can be made within a small space. They also include research studies whose importance or breadth of interest is insufficient to warrant publication as full articles, and case reports making a distinctive contribution to theory or method. Authors are encouraged to append an extended report to assist in the evaluation of the submission and to be made available to interested readers on request to the author. To ensure that the two-page limit is not exceeded, set typewriter margins to 66 characters maximum per line and limit the text, including references and a 100 word abstract, to 150 lines. Figures and tables should be avoided. Title, author and name and address for reprints and data of receipt are not included in the allowance. However deduct three lines from the text each and every time any of the following occur:
  - (a) title longer than 70 characters,
  - (b) author names longer than 70 characters,
  - (c) each address after the first address,
  - (d) each text heading (these should normally be avoided).

A character is a letter or space. A punctuation mark counts as two characters (character plus space) and a space must be allowed on each side of a mathematical operator.
7. Proofs are sent to authors for correction of print, but not for introduction of new or different material. They should be returned to the Journals Manager as soon as possible. Fifty complimentary copies of each paper are supplied to the senior author on request: further copies may be ordered on a form supplied with the proofs.
8. Authors should consult the Journal editor concerning prior publication in any form or in any language of all or part of their article.
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## Appendix 4.2

### **Means End Problem Solving Procedure (MEPS, Platt & Spivack, 1975a)**

In this procedure I am interested in your approach to solving problems. You are to make up some stories. For each story you will be given the beginning of the story and how the story ends.

Your job is to provide the ideal strategy for overcoming the problem situation stated at the beginning of the story. The strategy should connect the beginning of the story that is given to you with the end that is given to you. In other words you will make up the middle of the story.

**Make up at least one paragraph for each story. Say it out loud and I'll write down what you say. The tape recorder is in case I don't manage to copy everything.**

1. Mr P came home after shopping and found that he had lost his watch. He was very upset about it. The story ends with Mr P finding his watch and feeling good about it. You begin the story where Mr P found that he had lost his watch.
2. H loved his girlfriend very much, but they had many arguments. One day she left him. H wanted things to be better. The story ends with everything fine between him and his girlfriend. You begin the story with his girlfriend leaving him after an argument
3. Mr C had just moved in that day and didn't know anyone. Mr C wanted to have friends in the area. The story ends with Mr C having many good friends and feeling at home in the area. You begin the story with Mr C in his room immediately after arriving in the area.
4. One day Al saw a beautiful girl he had never seen before while eating in a restaurant. He was immediately attracted to her. The story ends when they get married. You begin when Al first notices the girl in the restaurant.
5. Mr A was listening to people speak at a meeting about how to make things better in his neighbourhood. He wanted to say something important and have a chance to be a leader too. The story ends with him being elected leader and presenting a speech. You begin the story at the meeting where he wanted to have a chance to be a leader.
6. John noticed that his friends seemed to be avoiding him. John wanted to have friends and be liked. The story ends when John's friends like him again. You begin where he first notices his friends avoiding him.

**Appendix 4.3****PROFORMA FOR SOCIO-DEMOGRAPHIC INFORMATION**

1. What age are you?
2. Which ethnic group do you consider yourself to belong to?
  - White?
  - Black-Caribbean?
  - Black-African?
  - Black-Other? (If so, which?)
  - Indian?
  - Pakistani?
  - Bangladeshi?
  - Chinese?
  - Other ethnic group? (If so, which?)
2. Are you:
  - Single?
  - Married?
  - Co-habiting?
  - Divorced?
  - Widow/Widower?
3. What is your postcode?
4. Are you employed at present?
5. What medication are you taking at the minute?
6. Have you ever hurt your head in an incident that was serious enough to warrant attendance at hospital or your General Practitioner? When was it? Describe exactly what happened.
7. What exactly have you had to drink in the last 24 hours?
8. Can you tell me the names of any medical conditions you have been diagnosed with in the past, or can you describe them to me?
9. When were you admitted to hospital? Day patient or inpatient?

### **Appendix 4.3**

**10. Have you experienced any upsetting events or major changes in your life in the last year?**

If yes, what happened?

**11. Have you experienced any of the following events in the past year:**

Bereavement? If yes, who was it that died?

Serious illness or injury?

Serious illness or injury of close relative or friend?

Change of address?

Separation or divorce?

The ending of a steady relationship?

Serious problems with a parent, relative, friend or neighbour?

Unemployment for more than one month?

Retirement?

Made redundant or sacked from work?

Something valuable lost or stolen?

Major financial problems?

Problem with Police?

Appendix 4.4

Severity of Alcohol Dependence Questionnaire (SADQ)

S.A.D.Q.                      Name . . . . .

   Age . . . . .

   Sex . . . . .

First of all, we would like you to recall a recent month when you were drinking heavily in a way which, for you, was fairly typical of a heavy drinking period. Please fill in the month and the year.

MONTH . . . . . YEAR . . . . .

We would like to know more about your drinking during this time and during other periods when your drinking was similar. We want to know how often you experienced certain feelings. Please reply to each statement by putting a circle around ALMOST NEVER or SOMETIMES or OFTEN or NEARLY ALWAYS after each question.

First we want to know about the physical symptoms that you have experienced first thing in the morning during these typical periods of heavy drinking.

PLEASE ANSWER EVERY QUESTION

- 1. During a heavy drinking period, I wake up feeling sweaty.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS
- 2. During a heavy drinking period, my hands shake first thing in the morning.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS
- 3. During a heavy drinking period, my whole body shakes violently first thing in the morning if I don't have a drink.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS
- 4. During a heavy drinking period, I wake up absolutely drenched in sweat.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS

The following statements refer to moods and states of mind you may have experienced first thing in the morning during these periods of heavy drinking.

- 5. When I'm drinking heavily, I dread waking up in the morning.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS
- 6. During a heavy drinking period, I am frightened of meeting people first thing in the morning.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS
- 7. During a heavy drinking period, I feel at the edge of despair when I awake.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS
- 8. During a heavy drinking period I feel very frightened when I awake.  
ALMOST NEVER   SOMETIMES   OFTEN   NEARLY ALWAYS



Appendix 4.4

Severity of Alcohol Dependence Questionnaire (SADQ)

The following statements also refer to the recent period when your drinking was heavy, and to periods like it.

9. During a heavy drinking period, I like to have a morning drink.

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS
10. During a heavy drinking period, I always gulp my first few morning drinks down as quickly as possible.

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS
11. During a heavy drinking period, I drink in the morning to get rid of the shakes.

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS
12. During a heavy drinking period, I have a very strong craving for a drink when I awake.

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS

Again the statements refer to the recent period of heavy drinking and the periods like it.

13. During a heavy drinking period, I drink more than a quarter of a bottle of spirits per day (4 doubles or 1 bottle of wine or 4 pints of beer).

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS
14. During a heavy drinking period, I drink more than half a bottle of spirits per day (or 2 bottles of wine or 8 pints of beer).

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS
15. During a heavy drinking period, I drink more than one bottle of spirits per day (or 4 bottles of wine or 15 pints of beer).

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS
16. During a heavy drinking period, I drink more than two bottles of spirits per day (or 8 bottles of wine or 30 pints of beer).

ALMOST NEVER    SOMETIMES    OFTEN    NEARLY ALWAYS

IMAGINE THE FOLLOWING SITUATION:  
(1) You have been COMPLETELY OFF DRINK for a FEW WEEKS  
(2) You then drink VERY HEAVILY for TWO DAYS

HOW WOULD YOU FEEL THE MORNING AFTER THOSE TWO DAYS OF HEAVY DRINKING?

17. I would start to sweat.

NOT AT ALL    SLIGHTLY    MODERATELY    QUITE A LOT
18. My hands would shake.

NOT AT ALL    SLIGHTLY    MODERATELY    QUITE A LOT
19. My body would shake.

NOT AT ALL    SLIGHTLY    MODERATELY    QUITE A LOT
20. I would be craving for a drink.

NOT AT ALL    SLIGHTLY    MODERATELY    QUITE A LOT

## Appendix 4.5

### *Windsor Clinic Alcohol Withdrawal Assessment Scale*

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#### **Nausea and vomiting**

- 0 None
- 2 Nausea, no vomiting
- 4 Nausea with dry heaves
- 6 Vomiting

#### **Tremor**

- 0 No tremor
- 2 With arms extended, no tremor visible, but can be felt fingertip to fingertip
- 4 Only visible with arms extended
- 6 Visible drinking a glass of water
- 8 Visible with arms at rest

#### **Anxiety**

- 0 No anxiety, at ease
- 2 Apprehension or understandable fear, e.g. of withdrawal symptoms, can be reassured
- 4 Fear not understandable or cannot be reassured

#### **Agitation**

- 0 Rests normally, no signs of agitation
- 2 Slight restlessness, cannot sit or lie still, awake when others asleep
- 4 Moves constantly, looks tense, wants to get out of bed but obeys requests to stay in bed
- 6 Constantly restless, gets out of bed for no obvious reason, returns to bed if taken
- 8 Extremely restless, aggressive, ignores requests to stay in bed

#### **Thought disturbances**

- 0 No disturbance
- 3 Parts of client's conversation do not make sense
- 6 Difficult to make sense of any of client's conversation

#### **Auditory disturbances**

- 0 Not present
- 4 Auditory hallucinations - can be reassured not real
- 6 Auditory hallucinations - client insists they are real
- 8 Auditory hallucinations - talks or shouts at unseen persons

#### **Convulsions**

- 0 No
- 10 Yes

#### **Visual disturbances**

- 0 Not present
- 4 Visual illusion - distortion of real object
- 6 Visual hallucinations, can be reassured not real
- 8 Visual hallucinations and client makes behavioural responses to them

#### **Quality of contact**

- 0 In contact with examiner
- 3 Requires prompting to maintain contact
- 6 Makes no contact with examiner

#### **Orientation**

- 0 Oriented in time, place and person
  - 2 Does not know day of week
  - 4 Does not know name of hospital
  - 6 Does not know is in hospital
  - 10 Does not know own name
-



Appendix 4.6

Date Entry method: \_\_\_\_\_  
Date: \_\_\_\_\_  
Second Entry: \_\_\_\_\_  
Date: \_\_\_\_\_

Interviewer's ID # & initials: \_\_\_\_\_  
Subject's ID # & Initials: \_\_\_\_\_  
Date: \_\_\_\_\_  
Assessment: \_\_\_\_\_ Session: \_\_\_\_\_  
Reviewed and Checked by: \_\_\_\_\_ Date: \_\_\_\_\_

UNIVERSITY OF WASHINGTON  
BEHAVIORAL RESEARCH & THERAPY CLINICS  
PARASUICIDE HISTORY INTERVIEW (PHI-2)

- S1 \_\_\_\_\_ TIME FRAME COVERED BY INTERVIEW (1 = Lifetime, 2 = Last Year, 3 = Since last assessment, \_\_\_\_\_ months ago, 4 = Other \_\_\_\_\_)
- S2 \_\_\_\_\_ At any time during your life/during the past year/since your last assessment have you deliberately harmed or injured yourself? (0 = No, 1 = Yes).
- S3 \_\_\_\_\_ How many times since then have you deliberately harmed or injured yourself?
- S4 \_\_\_\_\_ INTERVIEWER: HOW RELIABLE IS THIS NUMBER? (0 = Unreliable, 1 = Somewhat reliable, 2 = Reliable)
- S5 \_\_\_\_\_ HOW MANY PHI EPISODES WERE COUNTED? (Answer at the end of the interview)

Use this horizontal dateline to note parasuicides, (including suicide attempts or overdoses), in chronological order. Start in the lower right corner, on the first line, and move from right to left. Make a short vertical mark for each parasuicide. Next to the mark, write the date of the parasuicide, the method and if the subject received medical treatment as a result. Circle any parasuicides that the subjects describes as suicide attempts. Any further details should be written in the body of the interview.

_____ / _____ 12 months/ One year ago11 months ago
_____ / _____ 10 months ago9 months ago
_____ / _____ 8 months ago7 months ago
_____ / _____ 6 months ago5 months ago
_____ / _____ 4 months ago3 months ago
_____ / _____ 2 months ago1 month ago/ Most recent month

**Appendix 4.7**

**BSI Screening Questions**

Participant Number.....

Please carefully read each group of statements below. Circle one statement in each group that BEST describes how you have been feeling for THE PAST WEEK INCLUDING TODAY. Be sure to read all of the statements in each group before making a choice.

1.     I have no wish to die  
        I have a moderate wish to die  
        I have a moderate to strong wish to die
  
2.     I have no desire to kill myself  
        I have a weak desire to kill myself  
        I have a moderate to strong desire to kill myself
  
3.     I would try to save my life if I found myself in a life-threatening situation  
        I would take a chance on life or death if I found myself in a life-threatening situation  
        I would not take the steps necessary to avoid death if I found myself in a life-threatening situation

## Appendix 4.8



Date: \_\_\_\_\_

Name: \_\_\_\_\_ Marital Status: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Occupation: \_\_\_\_\_ Education: \_\_\_\_\_

This questionnaire consists of 20 statements. Please read the statements carefully one by one. If the statement describes your attitude for the **past week including today**, darken the circle with a 'T' indicating TRUE in the column next to the statement. If the statement does not describe your attitude, darken the circle with an 'F' indicating FALSE in the column next to this statement. **Please be sure to read each statement carefully.**

- |  |                         |                         |
|--|-------------------------|-------------------------|
| 1. I look forward to the future with hope and enthusiasm.  | <input type="radio"/> T | <input type="radio"/> F |
| 2. I might as well give up because there is nothing I can do about making things better for myself.                | <input type="radio"/> T | <input type="radio"/> F |
| 3. When things are going badly, I am helped by knowing that they cannot stay that way forever.                     | <input type="radio"/> T | <input type="radio"/> F |
| 4. I can't imagine what my life would be like in ten years.  | <input type="radio"/> T | <input type="radio"/> F |
| 5. I have enough time to accomplish the things I want to do.   | <input type="radio"/> T | <input type="radio"/> F |
| 6. In the future, I expect to succeed in what concerns me most.  | <input type="radio"/> T | <input type="radio"/> F |
| 7. My future seems dark to me.   | <input type="radio"/> T | <input type="radio"/> F |
| 8. I happen to be particularly lucky, and I expect to get more of the good things in life than the average person. | <input type="radio"/> T | <input type="radio"/> F |
| 9. I just can't get the breaks, and there's no reason I will in the future.  | <input type="radio"/> T | <input type="radio"/> F |
| 10. My past experiences have prepared me well for the future.  | <input type="radio"/> T | <input type="radio"/> F |
| 11. All I can see ahead of me is unpleasantness rather than pleasantness.  | <input type="radio"/> T | <input type="radio"/> F |
| 12. I don't expect to get what I really want.  | <input type="radio"/> T | <input type="radio"/> F |
| 13. When I look ahead to the future, I expect that I will be happier than I am now.                                | <input type="radio"/> T | <input type="radio"/> F |
| 14. Things just won't work out the way I want them to.   | <input type="radio"/> T | <input type="radio"/> F |
| 15. I have great faith in the future.  | <input type="radio"/> T | <input type="radio"/> F |
| 16. I never get what I want, so it's foolish to want anything.   | <input type="radio"/> T | <input type="radio"/> F |
| 17. It's very unlikely that I will get any real satisfaction in the future.  | <input type="radio"/> T | <input type="radio"/> F |
| 18. The future seems vague and uncertain to me.  | <input type="radio"/> T | <input type="radio"/> F |
| 19. I can look forward to more good times than bad times.  | <input type="radio"/> T | <input type="radio"/> F |
| 20. There's no use in really trying to get anything I want because I probably won't get it.                        | <input type="radio"/> T | <input type="radio"/> F |

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## Appendix 4.9

## NEUROPSYCHOLOGICAL CHARACTERISTICS OF THE SAMPLE

VARIABLE	GROUP			DIFFERENCES	
	PARASUICIDAL (N = 15)	ALCOHOL CONTROL (N = 15)	NON- DEPENDENT CONTROL (N = 15)	STATISTIC	SIGNIFICANCE
NART Mean (SD)	92.9 (11.0)	91.7 (11.8)	97.4 (8.8)	$F(2, 42) = 1.210$	n.s.
Digit Span - Scaled Score Mode (range)	8 (5 - 14)	7 (5 - 13)	7 (5 - 13)	Kruskal-Wallis $\chi^2 = 2.64$	n.s.
Digit Symbol - Scaled Score Mode (range)	6 (3 - 10)	3 (2 - 7)	7 (3 - 10)	Kruskal-Wallis $\chi^2 = 5.24$	n.s.
Hayling Test - Scaled Score Mode (range)	4 (2 - 9)	6 (1 - 6)	6 (3 - 6)	Kruskal-Wallis $\chi^2 = 5.03$	n.s.
Brixton Test - Scaled Score Mode (range)	4 (1 - 10)	1 (1 - 5)	3 (1 - 8)	Kruskal-Wallis $\chi^2 = 9.77$	$p < .01^a$
Word Lists 1 - Total Recall - Scaled Score Mode (range)	4 (1 - 9)	4 (1 - 10)	6 (3 - 11)	Kruskal-Wallis $\chi^2 = 4.196$	n.s.
Word Lists 2 - Recall - Scaled Score Mode (range)	5 (1 - 14)	8 (6 - 11)	9 (5 - 13)	Kruskal-Wallis $\chi^2 = 5.130$	n.s.
Word Lists 2 - Recognition - Scaled Score Mode (range)	3 (1 - 11)	11 (1 - 14)	8 (2 - 12)	Kruskal-Wallis $\chi^2 = 5.359$	n.s.
Word Lists 2 - Retention - Scaled Score Mode (range)	10 (5 - 16)	10 (7 - 18)	12 (6 - 16)	Kruskal-Wallis $\chi^2 = 1.648$	n.s.

<sup>a</sup> post hoc analysis with Mann-Whitney Test revealed that there were lower scores in the alcohol control group than in the non-dependent group ( $U = 40, p < .01$ )